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National  
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# ANNUAL SUMMARY. 1918.

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## INTRODUCTION.

**T**HE present account of the meteorology of 1918 is based on revised data and is intended primarily for scientific reference; for those needing prompt information the Annual Supplement to the India Daily Weather Report was issued on January 3, 1919.

Several systems of territorial division of India have come into use from time to time for meteorological purposes, each having been adopted to meet the needs of some particular set of data. A certain amount of confusion had been found to result from the consequent want of uniformity of boundaries, and, with a view of obviating the inconvenience caused, the Government of India in 1907 authorised the adoption of the following system of division :—

Chief political divisions.	Sub-divisions.
Burma . . . . .	Bay Islands. Lower Burma. Upper Burma.
Eastern Bengal and Assam . . .	Assam. Eastern Bengal. Bengal. Orissa. Chota Nagpur. Bihar.
Bengal . . . . .	United Provinces, East. United Provinces, West.
Punjab . . . . .	Punjab, East and North. Punjab, Southwest.
North-West Frontier Province . . .	North-West Frontier Province. Baluchistan.
Sind . . . . .	Sind.
Rajputana . . . . .	Rajputana, West. Rajputana, East.
Gujarat . . . . .	Gujarat.
Bombay . . . . .	Konkan. Bombay Deccan.

Chief political divisions.	Sub-divisions.
Central India . . . . .	Central India, West. Central India, East. Berar.
Central Provinces . . . . .	Central Provinces, West. Central Provinces, East.
Hyderabad . . . . .	Hyderabad, North. Hyderabad, South.
Mysore . . . . .	Mysore. Malabar.
Madras . . . . .	Madras, Southeast. Madras Deccan. Madras Coast, North.

From the 1st April 1912 a fresh territorial division of Eastern Bengal and Assam and Bengal was sanctioned by which Eastern Bengal was restored to Bengal, while Orissa, Chota Nagpur and Bihar were constituted into a separate province under the name of Bihar and Orissa. The present arrangement is shown below :—

Chief political divisions.	Sub-divisions.
Assam . . . . .	Assam.
Bengal . . . . .	Bengal. Orissa.
Bihar and Orissa . . . . .	Chota Nagpur. Bihar.

In the present review the new division has been adopted throughout.

**National Oceanic and Atmospheric Administration**

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The system of division is illustrated in Plate I at the end of this Annual Summary, and its relationship to the old system of divisions which was adopted for the tables of the 'Geographical Summary,' given in former issues can be obtained by reference to pages 9 to 14 of Volume III of the Indian Meteorological Memoirs.

The data of Table B in the monthly reviews and in the present annual part are obtained, with a few exceptions, from the observations telegraphed daily to Simla for publication in the Daily Weather Report. The maximum and minimum temperature data of the second class observatories derived from these telegraphic reports are given

in Table B, occasionally differ to some slight extent from the corresponding means in Table A. The chief reason for this is that in Table B the daily or 24-hour period is assumed to end at 8 hrs. and in Table A at midnight [except for rainfall the period of which ends at 8 hours], and hence the maximum temperature in Table B for any month of 31 days at any station gives the mean for 31 periods of 24 hours ending at 8 hours of the 31st and in Table A for the same number of 24-hour periods ending at midnight on the 31st, and virtually, therefore, of a monthly period one day in advance of the former. Similarly for months of 28, 29 or 30 days.

### Annual Summary, 1918.

*General summary of weather conditions.*—The usual winter precipitation in northern India was exceptionally light in January and February; and the unsettled conditions that prevailed in southern India during this period caused excessive rain there. In March and April winter disturbances were fairly frequent in northern India and caused heavier rain than usual. The monsoon broke exceptionally early, on the 11th May on the Malabar coast and on the 27th May in Bengal; but the Bombay current was, except at the beginning, very weak. Rainfall was consequently below

normal over the whole country with the exception of Burma and north-east India. During the retreating monsoon period rainfall continued, on the whole, to be in defect, the only areas where the fall was more or less in excess being Kashmir, Sind, Mysore and south Madras. The year as a whole was with the exception of 1899 the driest on record.

Five storms occurred in the Bay of Bengal during the year, but none of them could be classed as severe.

The variations of cloud, humidity and temperature were in general agreement with those of rainfall.

### SOLAR AND MAGNETIC ACTIVITY.

#### REPORT FROM KODAIKANAL OBSERVATORY.

*Sunspots.*—The following table shows the monthly numbers of new groups observed at Kodaikanal, and their

distribution between the northern and southern hemispheres. The mean daily numbers of spots visible are also given:—

TABLE I.

	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Year.
New groups .	30	19	28	26	31	25	35	32	24	32	27	23	332
North .	15	11	11	11	17	16	18	15	11	18	14	8	165
South .	15	8	17	15	14	9	16	16	13	14	12	15	164
Equator .	...	...	...	...	...	...	1	1	...	...	1	...	8
Daily numbers	6.8	4.4	5.0	5.7	5.1	3.9	6.7	5.2	4.1	5.8	5.1	4.2	5.2

The maximum spot activity of the present cycle took place during the second half of 1917 for both hemispheres when the mean monthly number of new groups reached 17 for the northern hemisphere, and 16 for the southern; and the mean daily number rose to 7.1. The above table for 1918 shows a considerable reduction in these figures.

The number of new groups decreased more rapidly in the northern hemisphere than in the southern and in 1918 the spot activity was about equal in the two hemispheres.

The approximate mean latitude of the spots was  $11^{\circ}8$  in the northern hemisphere and  $14^{\circ}6$  in the southern, a decrease of over  $2^{\circ}$  in each hemisphere compared with 1917.

The number of bright reversals and of displacements of the H $\alpha$  line fell from 483 and 123 respectively in 1917, to 422 and 108 in 1918. There were 44 observations of D<sub>3</sub> as a dark line in 1918, the great majority being recorded during the first half of the year.

*Prominences.*—A rapid decline in prominence activity occurred during 1918. The mean daily areas in square minutes of arc, derived from the Kodaikanal photographic records, are as follows :—

TABLE 2.

	North.	South.	Total.
1918—January to June ...	2.28	2.72	5.00
„ July to December	1.24	1.99	3.23

The mean daily number recorded also fell from 15.2 for the first six months to 16.1 for the second half of the year.

The high latitude prominences reached their greatest development, in the southern hemisphere, and the closest approach to the poles during the early months of the year and then rapidly declined. After July there were no prominences of any magnitude recorded between latitude  $+50^{\circ}$  and the north pole. In the south the polar regions maintained some activity until the end of the year. This de-

cline of the polar prominences is a well marked phase in the prominence cycle and occurred last in the year 1907.

Prominences generally attained a maximum development in the northern hemisphere early in 1917, whilst the southern maximum occurred during the first half of 1918. This delayed action of the south has caused a reversal of the relative activity of north and south as is seen on comparing the areas given above with those in the report for 1917.

Prominences projected on the disc as absorption markings attained their greatest development during the first six months of 1918 in both hemispheres, but there was a rapid decline during the latter half of the year in the northern hemisphere only.

Prominence areas east and west of the Sun's axis show a western excess during the first half of the year and an eastern excess during the second half. The denser prominences showing as absorption markings give the usual eastern excess throughout the year, the areas recorded east of the meridian being 52.4 per cent of the whole, derived from 5720 markings. Metallic prominences and prominences showing displaced lines were more frequent on the western limb than on the eastern.

The usual excess of displacements towards red is indicated for the hydrogen lines both at the limb and on the disc.

*Magnetic observations.*—Continuous magnetograph records are obtained of declination, vertical force, and horizontal force. Absolute observations for dip are made daily excepting Sundays, declination and horizontal force on three days per week alternately. All the records are made over to the Magnetic Survey Office, Dehra Dun, and the results are published by the Survey annually.

The vertical force magnetograph had occasionally to be readjusted during the year, and the earth inductor gave trouble owing to wear of the commutator, which was turned true in December.

Twenty-three "great" and 136 "moderate" magnetic storms were registered during the year. March, November and December, were the most active months of the year, and January was the quietest month. There were nine "great" storms recorded in December.

J. EVERSHED,

Director,

Kodaikanal and Madras Observatories.

### Report from the Bombay Observatory.

#### ALIBAG MAGNETIC RECORD, 1918.

During the year 1918 there were 115 calm days, 231 days of small, 17 days of moderate and 2 days of great disturbance as against 142 calm days, 207 days of small, 18 days of moderate and 3 days of great disturbance in the previous year.

The following table, prepared in accordance with the suggestions made by the International Commission, Terrestrial Magnetism, represents the magnetic character of each day during the year :—

TABLE 3.—*Representing the magnetic character of the day during the year 1918.*

1918.	MONTH.												
	Date.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
1 . .	0	1	1	1	1	0	1	1	1	1	1	1	2
2 . .	0	1	1	0	0	0	1	1	1	1	1	1	1
3 . .	1	0	1	1	0	0	1	1	1	1	1	0	1
4 . .	1	0	0	1	0	0	1	1	1	1	1	0	1
5 . .	1	1	0	1	1	0	0	1	1	1	1	0	0
6 . .	1	1	0	1	0	1	0	1	1	1	1	0	0
7 . .	1	1	1	1	0	1	0	1	1	1	1	0	1
8 . .	0	0	2	1	0	0	1	1	1	1	2	0	2
9 . .	0	1	1	1	0	1	1	1	1	1	1	0	1
10 . .	1	1	1	1	0	2	1	1	1	1	1	1	1
11 . .	1	1	1	2	1	1	1	1	1	0	0	1	1
12 . .	1	1	1	1	1	1	1	1	1	0	0	1	1
13 . .	1	1	0	0	0	1	1	1	1	0	0	0	1
14 . .	1	1	1	0	1	1	1	1	0	0	0	0	1
15 . .	1	1	2	0	1	1	1	1	2	0	1	1	0
16 . .	0	1	1	1	1	1	1	1	2	1	2	1	0
17 . .	0	1	1	1	2	1	0	0	0	1	1	1	1
18 . .	0	0	1	1	1	1	1	1	0	0	1	1	1
19 . .	0	0	0	1	1	0	0	0	0	1	1	1	1
20 . .	1	1	1	0	1	0	0	0	0	1	1	1	1
21 . .	1	1	1	1	1	1	1	0	0	2	0	1	1
22 . .	0	0	1	1	1	1	1	0	1	1	1	2	1
23 . .	0	1	1	1	1	1	0	0	0	0	1	1	1
24 . .	1	1	1	1	0	0	0	1	1	1	1	1	2
25 . .	1	0	0	1	0	0	0	1	1	0	0	0	1
26 . .	1	0	1	1	0	1	1	1	1	0	0	0	1
27 . .	1	1	1	1	0	0	1	1	1	1	0	0	0
28 . .	1	1	1	1	0	0	1	0	1	1	1	0	0
29 . .	2	—	1	1	1	0	0	1	0	1	1	2	0
30 . .	2	—	1	1	1	0	0	1	0	1	2	1	0
31 . .	2	—	1	—	0	—	1	1	—	—	2	—	1
Sum . .	24	20	27	26	17	16	22	23	23	26	29	25	

In the above table 0 represents calm day.

" " small disturbance.

" " larger disturbance.

Days are reckoned from 4 h. 51 m. to 4 h. 51 m. of local civil mean time corresponding to 6 h. to 0 h. of Greenwich civil mean time.

The following is a list of days during the year 1918 selected as "quiet" from the Alibag records, as suitable locally for the determination of the magnetic diurnal inequalities:—

TABLE 4.

MONTHS.	Selected quiet days.					
	January	February	March	April	May	June
1918.	2	9	19	22	23	
January	2	9	19	22	23	
February	4	8	18	20	22	
March	5	6	19	25	26	
April	2	13	14	20	29	
May	3	7	9	27	28	
June	2	8	19	20	29	
July	6	7	17	22	23	
August	4	13	18	19	23	
September	12	13	14	15	26	
October	11	12	13	14	27	
November	4	6	8	26	27	
December	5	6	16	22	29	

The mean values of the magnetic elements obtained from all days in the year 1918 are as follows:—

Mean easterly declination . . . . .  $0^{\circ} 28' 24''$   
 „ Horizontal force . . . . . 0.36886 c.g.s.  
 „ Vertical force . . . . . 0.16979 c.g.s.  
 „ Inclination . . . . .  $24^{\circ} 43' 0''$

The following table gives the corrected monthly mean values of the several magnetic elements and of the summed ranges of the horizontal force.

TABLE 5.

Months.	ABSOLUTE VALUES OF				HORIZONTAL FORCE.	
	Horizontal force.	Vertical force.	Inclina-tion.	Easterly declina-tion.	Summed ranges.	Summed ranges (smooth-ed.)
1918.	C. G. S.	C. G. S.	° ' "	° ' "	C. G. S.	C. G. S.
January	0.36890	0.16937	24 39.7	0 29 48	0.00369	0.00392
February	0.36886	0.16942	24 40.2	0 29 54	0.00367	0.00389
March	0.36884	0.16937	24 39.9	0 30 22	0.00402	0.00381
April	0.36885	0.16951	24 40.9	0 29 46	0.00414	0.00373
May	0.36890	0.16973	24 42.4	0 28 42	0.00974	0.00869
June	0.36896	0.16980	24 42.8	0 28 28	0.00396	0.00361
July	0.36901	0.16990	24 43.3	0 28 0	0.00393	0.00350
August	0.36886	0.16995	24 44.3	0 27 44	0.00335	0.00342
September	0.36879	0.16995	24 44.5	0 27 27	0.00252	0.00336
October	0.36880	0.17004	24 45.1	0 27 9	0.00351	0.00332
November	0.36880	0.17021	24 46.5	0 26 52	0.00351	0.00327
December	0.36873	0.17021	24 46.7	0 26 34	0.00262	0.00324

TABLE 6.—Smoothed summed range of horizontal force.

(Continuation of table 536 in the Colaba Magnetic Data, 1846—1905.)

Unity =  $\gamma = 0.00001$  c.g.s.

Months.	January.	February.	March.	April.	May.	June.	July.	August.	Septem-ber.	October.	November.	December.	Year.	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1905	294	295	297	300	307	311	322	321	320	320	322	321	311	
1906	318	316	314	312	304	294	295	299	301	302	301	301	305	
1907	300	299	305	310	315	323	326	323	318	314	313	314	318	
1908	317	320	314	308	306	301	298	294	293	294	296	295	303	
1909	269	284	290	296	297	301	302	301	298	289	280	274	292	
1910	272	272	263	254	252	247	244	244	245	244	244	243	252	
1911	289	284	280	227	223	217	212	207	203	203	202	202	216	
1912	204	205	204	205	208	211	215	219	222	223	223	224	214	
1913	223	224	226	225	222	221	221	220	219	220	222	224	222	
1914	226	229	231	231	233	234	235	238	242	246	251	257	238	
1915	264	268	274	282	288	290	288	288	294	300	303	303	287	
1916	302	300	297	294	296	297	299	302	303	305	309	316	362	
1917	325	334	345	356	365	377	391	400	408	402	400	397	375	
1918	392	389	381	373	369	361	350	342	336	332	327	324	356	

\* The Summed range figures are the sums without regard to sign of the twenty-four ordinates of the diurnal inequality: smoothed summed ranges are derived by taking overlapping means of twelve consecutive monthly values and reducing them to the proper epoch, so as to eliminate the annual variation.

From the table of ranges given above it will be seen that the maximum of the 11-year period has been reached and passed about September 1917.

N. A. F. Moos,

Director,

Bombay and Alibagh Observatories.

### Nocturnal Radiation.

Observations of the terrestrial radiation thermometers, which are, as a rule, not very reliable, were recorded during the year 1918, at the following stations:—

Srinagar.	Jodhpur.	Bombay.
Lahore.	Calcutta (Alipore).	

The following Table 7 gives the average data of past years for the above stations; and Table 8 the departure from the normal.

TABLE 7.—Average depression of mean monthly and annual nocturnal radiation temperature below mean monthly and annual minimum shade temperatures.

Station.	Number of years of observa- tions used.	January.	February.	March.	April.	May.	June.	July.	August.	Septem- ber.	October.	November.	December.	Year.
Srinagar . . .	20—25	8·4	8·8	9·7	10·1	11·0	10·8	10·6	10·3	11·8	11·6	11·2	10·6	10·4
Lahore . . .	41—42	9·7	9·4	9·0	9·2	9·0	8·3	4·1	4·2	6·6	9·8	10·8	10·1	8·2
Jodhpur . . .	21—23	8·5	8·3	8·3	7·9	5·4	2·9	2·3	2·4	4·4	8·6	10·2	?	8·3?
Calcutta (Alipore) . .	41—42	7·4	6·9	6·0	4·5	..1	2·1	1·9	1·9	2·5	4·3	6·4	7·7	4·6
Bombay . . .	43	9·5	8·9	8·1	6·6	4·4	2·9	2·4	2·7	3·3	6·1	8·9	9·8	6·1

TABLE 8.—Departures from the averages of Table 7 of mean monthly and annual depression of nocturnal radiation temperatures in 1918.

STATION.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Year.
Srinagar . . . . .	..	..	..	..	..	..	..	..	..	..	..	..	..
Srinagar . . . . .	-4·5	-2·5	-5·6	-4·3	-2·7	-4·0	-4·6	-4·1	-3·6	-3·4	-2·7	-6·2	-4·0
Lahore . . . . .	+1·4	+0·7	-1·1	+0·3	+0·8	-0·7	+2·0	+0·1	+1·7	+1·7	+0·9	-0·3	+0·6
Jodhpur . . . . .	-5·3	-5·2	-4·6	-4·2	-1·5	+0·2	+0·6	+2·3	-2·3	-3·6	-4·5	?	-2·6?
Calcutta (Alipore) . . .	+1·7	+2·4	+3·3	+0·7	+0·4	-0·3	-0·1	+0·6	+0·5	+1·7	+1·0	+1·2	+1·1
Bombay . . . . .	+0·2	-1·0	0	0	-0·6	+1·4	+2·3	+2·3	+1·8	+0·6	-1·7	-3·6	+0·1

## Temperature of the ground.

Observations of the temperature of the surface of the ground were recorded during the year 1918 at four stations, Lahore, Jaipur, Calcutta (Alipore) and Bombay; and of the temperature underground at Bombay only.

The thermometers used for the purpose are verified standard mercurial thermometers with attached scales of porcelain, the scale being engraved also on the tube.

At Lahore the surface thermometer is read four times daily; at Jaipur at 10 and 16 hrs., and at Calcutta at 13 hrs. 45 mins. At Bombay the two nearest to the surface are read five times a day, the deeper instruments being read once only.

The thermometers below the surface have their bulbs protected with pointed copper shoes which rest on ground at the bottom of a wooden tube, inserted to the specified depth and projecting six inches above the surface, the upper ends being closed by a cap of metal or wood. Those at depths of five feet or more are attached to the lower ends of stout wooden bars of about half the diameter of the tube.

Those at one foot have a brass ring attached to the top of the wooden frame by which they are lifted; and in all these the lower part of the frame around the bulb has been cut away, and the lower end fitted with the copper shoe above mentioned.

The average monthly data are here given at length, but a paper published by Mr. R. Ll. Jones (*Meteorological Memoirs*, Vol. XV, Pt. III, 1904), makes it clear that the results of the measurement of underground temperatures lead to inconsistent results when analysed on the lines developed by Lord Kelvin. It may be that this is due to irregularities from percolation of rainfall as well as to imperfections in the mode of measurement.

Under these circumstances a table of departures from the average of past years is more likely to give indications of value than a statement of absolute temperatures recorded; such a table is therefore given below. The number of years included in the averages in the different cases lies between 23 and 29.

TABLE 9.—Departures from normal of the mean monthly and annual temperatures of the air and of the ground in 1918.

STATION.		January	February	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Year.
LAHORE	Air . . .	◦	◦	◦	◦	◦	◦	◦	◦	◦	◦	◦	◦	◦
	Surface . . .	-1·0	+2·1	-2·5	-6·1	+4·9	+0·4	+4·5	+2·8	+0·2	+0·6	+0·3	-0·3	+0·5
JAIPUR	Air . . .	-2·3	+2·5	-0·1	-4·8	+2·8	+0·8	+3·9	+1·4	0	+1·9	+0·1	-2·9	+0·3
	Surface . . .	+1·5	+7·7	+2·7	+1·1	+4·3	+6·8	+14·2	+1·7	+3·8	+6·5	+4·7	+1·3	+4·7
CALCUTTA (ALIPORE)	Air . . .	-1·8	+0·7	+1·8	-1·5	-1·6	-2·2	+2·4	+0·9	+1·5	+1·4	+1·8	-0·2	+0·3
	Surface . . .	+17·9	+26·8	+22·4	+8·8	-4·6	-4·2	+6·2	+3·9	+5·2	+14·3	+23·7	+20·8	+11·8
BOMBAY	Air . . .	+0·4	+0·7	+3·0	-1·2	-1·0	0	+2·5	+1·7	+1·3	+1·4	+2·5	-0·4	+0·9
	1 inch deep . . .	+0·4	+0·6	+0·8	-1·2	-0·5	+0·1	+2·5	+1·8	+1·8	+1·8	+2·4	-0·2	+0·8
	9 inches „ „	+1·4	+1·6	+1·8	+0·2	+0·8	+0·8	+2·8	+2·7	+2·4	+2·6	+3·1	+1·2	+1·8
	11 foot 8 inches deep	+2·5	+3·1	+3·1	+1·5	+2·2	+1·6	+3·0	+3·5	+3·2	+3·3	+3·6	+2·1	+2·8
	5 feet deep . . .	+0·8	+1·6	+2·0	+1·2	+1·0	+0·9	+1·2	+2·1	+2·7	+2·9	+2·7	+2·6	+1·8
11 „ „ . . .		+0·2	+0·8	+1·1	+1·0	+1·0	+0·8	-0·2	-0·3	+0·2	+0·8	+0·8	+1·0	+0·6

## Temperature.

The methods of exposing the thermometers at observatories in India were described in pages 18-19 of the Annual Report for 1890.

The method of deducing the daily and monthly means from the observed reading of the instruments was described in pages 6 and 7 of the Monthly Weather Review for January 1918.

The departures from normal of the mean temperature of each month given in Table A of the Monthly Weather Reviews are deduced by a comparison of the actual monthly means with the normal monthly means given in the "Indian Meteorological Memoirs," Volume XVII, pages 16 to 20.

The departures obtained by a comparison of these normal means with the actual monthly means in Table A of the Monthly Weather Reviews for the year are given in Table 10.

In Table B, published in each Monthly Review, the mean temperature of the day is calculated, as in the Daily Weather Report, by the formula:—daily means =  $\frac{\text{maximum} + \text{minimum}}{2}$ .

It differs from the true daily mean by amounts varying slightly with the season. In Table B of the Monthly Weather Reviews of the year 1918 are given the departure from normal of the monthly means of daily maximum and minimum temperatures, as well as the departures of the monthly means of daily mean temperature given by the formula  $\frac{1}{2}(\text{maximum} + \text{minimum})$ .

In the great majority of cases the normals of maximum and minimum temperatures for the stations in Table B, are derived from the data of the 33 year period 1878-1910; in the case of some of the most recently started observatories the period is shorter, but it is never less than five years. The normals are given in the "Indian Meteorological Memoirs," Volume XXII, Part III, pages 426-457.

Tables 11 to 16 give summaries of the temperature departure data for each month of the year 1918 and for the whole year. In the first set of tables (Tables 11, 12 and 13) the departure data are given for the 15 chief political divisions, and in the last three tables (Tables 14 to 16) the data are given for the 33 sub-divisions.

TABLE 10.—*Departure from normal of monthly and annual mean temperature at first and second class observatories in 1918.*

DIVISION.	Station.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Year.
BENGAL . . . . .	Calcutta . . . . .	◦	◦	◦	◦	◦	◦	◦	◦	◦	◦	◦	◦	◦
PUNJAB . . . . .	Lahore . . . . .	-1.0	+2.1	-2.5	-6.1	+4.9	+0.4	+4.5	+2.8	+0.2	+0.6	+0.3	-0.8	+0.5
RAJPUTANA . . . . .	Jaipur . . . . .	-2.3	+2.5	-0.1	-4.8	+2.8	+0.8	+3.9	+1.4	0	+1.9	+0.1	-2.9	+0.3
BOMBAY . . . . .	Bombay . . . . .	+0.4	+0.7	+3.0	-1.2	-1.0	0	+2.5	+1.7	+1.3	+1.4	+2.5	-0.4	+0.9
MYSSORE . . . . .	Bangalore . . . . .	+0.3	-1.7	-1.8	-0.4	-2.6	-0.5	+1.9	+0.8	+1.1	+2.6	+3.0	+1.4	+0.3
MADRAS . . . . .	Madras . . . . .	-0.3	-1.6	-1.6	-0.3	-1.9	-0.9	+2.4	+2.5	+1.3	+1.5	+0.7	+1.1	+0.2
HILL STATIONS, EXCLUDING KASHMIR AND BALUCHISTAN	Katmandu . . . . .	-0.2	+2.7	+2.7	+0.6	+2.8	+0.3	+0.6	+0.4	+1.0	+1.1	+0.8	-3.2	+0.8
EXTRA INDIA . . . . .	Seychelles . . . . .	-1.2	-0.2	+1.2	+1.4	+0.7	+0.6	+0.5	+0.1	+0.5	+0.8	+1.7	+0.9	+0.6
	Mauritius . . . . .	-1.1	-1.0	-0.9	-0.2	-1.2	-1.1	-1.6	-2.9	-1.4	-0.4	-0.5	+0.2	-1.0

TABLE 11.—*Departure from normal of the mean monthly and annual maximum temperature in the fifteen chief political divisions of India in 1918.*

DIVISION.		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Year.
Burma	.	◦	◦	◦	◦	◦	◦	◦	◦	◦	◦	◦	◦	◦
Assam	.	-2·0	-1·1	-0·5	-1·6	-3·5	-0·9	+0·3	-0·9	-0·7	-0·5	+0·8	+0·4	-0·9
Bengal	.	+0·6	+0·5	-0·9	-0·1	+2·1	-1·9	-2·1	-0·7	-0·3	+0·4	-0·1	+0·3	-0·2
Bihar and Orissa	.	-1·5	+1·3	+0·9	-2·5	-2·5	-3·6	+0·9	-0·9	+0·6	+1·2	+1·4	-0·2	-0·4
United Provinces	.	-2·2	+1·6	+1·1	-2·5	-3·7	-5·8	+3·4	-1·1	+1·0	+3·1	+1·8	+0·4	-0·2
Punjab	.	-0·6	+3·3	-0·4	-3·4	-0·7	-3·9	+7·0	+2·9	+3·5	+4·3	+1·3	-0·5	+1·1
North-West Frontier Province	.	+1·5	+3·1	-4·7	-4·6	+9·1	+1·5	+5·9	+4·7	+0·7	+0·7	-0·5	-4·1	+1·1
Sind	.	0	+1·8	-2·6	-2·8	+0·4	-2·2	+0·5	+0·9	-0·8	+1·5	+1·1	-1·7	-0·3
Rajputana	.	-1·2	+3·3	-0·6	-4·2	+1·3	-1·6	+3·4	+2·9	+1·4	+2·2	+0·5	-2·5	+0·3
Bombay	.	-1·2	+0·5	+0·1	-1·6	-2·4	-9·6	+3·1	+1·5	+1·4	+3·4	+2·6	-0·2	+0·5
Central India	.	-2·2	+2·7	-0·7	-3·0	+1·2	-2·6	+5·6	+1·5	+2·1	+4·6	+3·1	-1·4	+0·9
Central Provinces	.	-3·2	+1·6	-0·6	-1·5	-1·5	-5·0	+3·6	-0·6	+2·8	+4·5	+3·2	-0·1	+0·3
Hyderabad	.	-3·6	-0·4	-1·3	+0·2	-4·4	-1·9	+4·8	+1·3	+3·5	+4·4	+2·5	+0·8	+0·5
Mysore	.	-2·5	-2·3	-1·9	-1·3	-4·7	+0·5	+4·4	+1·9	+2·5	+3·7	+0·4	+0·5	+0·2
Madras	.	-2·1	-1·8	-1·2	-0·4	-3·3	-0·2	+2·6	+1·4	+2·0	+3·0	-0·2	-0·2	0

TABLE 12.—*Departure from normal of the mean monthly and annual minimum temperature in the fifteen chief political divisions of India in 1918.*

DIVISION.		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Year.
Burma	.	◦	◦	◦	◦	◦	◦	◦	◦	◦	◦	◦	◦	◦
Assam	.	0	-1·2	-0·1	-1·9	-1·3	-0·7	+0·3	-0·6	0	-0·4	+0·6	+0·9	-0·4
Bengal	.	-1·3	-0·2	+2·0	-0·4	+2·1	-0·5	-0·6	-0·3	0	+0·2	-0·3	-0·9	0
Bihar and Orissa	.	-2·1	-1·6	+0·8	-2·0	0	-1·4	+0·4	-0·3	+0·3	-0·5	-0·1	-1·8	-0·7
United Provinces	.	-3·0	-2·2	+0·4	-1·5	-0·5	-2·4	+1·2	-0·4	-0·3	-2·9	+0·1	-1·0	-1·0
Punjab	.	-2·9	+0·1	+0·7	-2·4	+2·8	-1·8	+2·4	+0·9	-1·0	-2·2	-1·1	-1·7	-0·5
North-West Frontier Province	.	-2·1	+1·2	-0·3	-4·1	+3·5	-0·2	+2·2	+2·0	-0·5	-0·3	-0·5	+0·2	+0·1
Sind	.	-3·5	+1·5	-0·1	-2·7	+4·1	+1·0	+0·6	+1·9	-1·1	-0·5	+0·3	+1·1	+0·2
Rajputana	.	-2·6	+1·8	+0·5	-2·3	+1·3	-0·7	-0·5	-0·6	-0·9	-0·2	+0·1	-0·7	-0·4
Bombay	.	-3·0	+1·2	-0·4	-4·8	+1·4	-1·4	+0·2	+0·2	-1·0	-0·2	+0·5	-2·3	-0·8
Central India	.	-0·6	+0·2	+0·2	-2·5	0	-0·9	+0·1	+0·6	-0·5	-0·7	+3·1	+1·1	0
Central Provinces	.	-3·7	+0·5	-0·1	-3·5	+2·4	-1·4	+1·7	+0·9	-1·2	-1·7	+1·9	-0·8	-0·4
Hyderabad	.	-2·8	+1·1	+0·1	-1·7	+0·7	-2·5	+0·6	+0·1	+0·2	-2·5	+1·7	+1·3	-0·3
Mysore	.	-0·7	-0·7	-0·9	-0·7	-3·0	-1·4	+1·1	+0·2	+0·9	-1·2	+4·6	+3·9	+0·2
Madras	.	+0·6	-2·2	-1·7	-1·0	-0·6	-1·0	-0·2	+0·3	+0·2	+0·7	+4·1	+2·2	+0·1

Table 18.—Departure from normal of the mean monthly and annual mean temperature in the fifteen chief political divisions of India in 1918.

DIVISION.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Year.
	°	°	°	°	°	°	°	°	°	°	°	°	°
Burma . . . . . . . . . . . . . . . . . .	-1·0	-1·1	-0·3	-1·7	-2·4	-0·8	+0·3	-0·8	-0·4	-0·5	+0·7	+0·6	-0·6
Assam . . . . . . . . . . . . . . . . . .	-0·4	+0·2	+0·6	-0·2	+2·1	-1·2	-1·3	-0·5	-0·1	+0·3	-0·2	-0·8	-0·1
Bengal . . . . . . . . . . . . . . . . . .	-1·8	-0·2	+0·9	-2·3	-1·3	-2·5	+0·6	-0·6	+0·4	+0·4	+0·6	-1·0	-0·6
Bihar and Orissa . . . . . . . . . . . . . . . . . .	-2·6	-0·3	+0·8	-2·0	-2·1	-4·1	+2·3	-0·7	+0·8	+0·1	+0·9	-0·8	-0·6
United Provinces . . . . . . . . . . . . . . . . . .	-1·7	+1·6	+0·1	-2·9	+1·1	-2·9	+4·7	+1·9	+1·3	+1·0	+0·1	-1·1	+0·3
Punjab . . . . . . . . . . . . . . . . . .	-0·7	+2·3	-1·9	-5·3	+3·7	-0·8	+3·8	+3·1	+0·6	+0·4	-0·4	-0·9	+0·3
North-West Frontier Province . . . . . . . . . . . . . . . . . .	-1·1	+2·3	-2·4	-3·6	+6·5	+1·2	+3·3	+3·3	-0·2	+0·1	-0·1	-1·5	+0·7
Sind . . . . . . . . . . . . . . . . . .	-1·3	+1·8	-1·0	-2·6	+0·8	-1·5	0	+0·2	-0·8	+0·6	+0·5	-1·2	-0·4
Rajputana . . . . . . . . . . . . . . . . . .	-2·1	+2·2	-0·5	-4·5	+1·4	-1·5	+1·8	+1·6	+0·2	+1·0	+0·5	-2·4	-0·2
Bombay . . . . . . . . . . . . . . . . . .	-0·9	+0·4	+0·2	-2·1	-1·2	-0·7	+1·6	+1·1	+0·5	+1·3	+2·8	+0·5	+0·3
Central India . . . . . . . . . . . . . . . . . .	-3·0	+1·6	-0·4	-3·2	+1·8	-2·0	+3·7	+1·2	+0·5	+1·4	+2·5	-1·1	+0·2
Central Provinces . . . . . . . . . . . . . . . . . .	-3·0	+1·3	-0·3	-1·6	-0·4	-3·7	+2·1	-0·9	+1·5	+1·0	+2·5	+0·6	0
Hyderabad . . . . . . . . . . . . . . . . . .	-2·2	-0·5	-1·1	-0·2	-3·7	-0·3	+2·9	+0·8	+2·2	+1·6	+3·5	+2·4	+0·8
Mysore . . . . . . . . . . . . . . . . . .	-0·9	-2·3	-1·8	-0·7	-2·7	-0·2	+2·1	+1·1	+1·4	+2·2	+2·3	+1·3	+0·1
Madras . . . . . . . . . . . . . . . . . .	-0·7	-2·3	-1·3	-0·4	-2·3	-0·4	+1·8	+1·0	+1·3	+1·7	+1·4	+0·7	0
Mean of India . . . . . . . . . . . . . . . . . .	-1·6	+0·4	-0·4	-2·3	-0·3	-1·7	+2·0	+0·7	+0·6	+0·8	+1·2	-0·2	-0·1

TABLE 14.—*Departure from normal of the monthly and annual maximum temperature in the 38 sub-divisions of India in 1918.*

Sub-division.		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Year.
		°	°	°	°	°	°	°	°	°	°	°	°	°
1. Bay Islands .	.	-1·9	-2·5	-1·3	-0·3	-1·9	-1·3	-0·5	-0·8	-0·1	-1·1	-0·5	-0·3	-1·0
2. Lower Burma	.	-2·7	-1·9	-0·6	-1·5	-3·3	+0·1	+0·6	-0·5	-0·9	+0·3	+1·7	+0·9	-0·7
3. Upper Burma	.	-1·3	-0·3	-0·3	-1·6	-3·7	-1·9	0	-1·2	-0·6	-1·3	-0·3	-0·2	-1·1
4. Assam	.	+0·6	+0·5	-0·9	-0·1	+2·1	-1·9	-2·1	-0·7	-0·3	+0·4	-0·1	+0·3	-0·2
5. Bengal	.	-1·5	+1·3	+0·9	-2·5	-2·5	-3·6	+0·9	-0·9	+0·6	+1·2	+1·4	-0·2	-0·4
6. Orissa	.	-3·0	+0·5	+0·7	-1·7	-3·0	-4·4	+3·4	-0·4	+1·3	+3·1	+1·8	+1·2	0
7. Chota Nagpur	.	-3·2	+1·5	+2·1	-1·3	-3·6	-7·1	+4·0	-0·9	+1·4	+3·7	+2·3	+0·5	-0·1
8. Bihar	.	-0·6	+2·8	+0·8	-4·0	-4·2	-5·7	+3·0	-1·8	+0·5	+2·7	+1·5	-0·3	-0·5
9. United Provinces, East	.	-0·5	+3·1	-0·1	-3·1	-2·8	-5·2	+6·6	+1·1	+2·3	+4·0	+1·8	-0·1	+0·6
10. Do., do., West	.	-0·7	+3·5	-0·8	-3·8	+1·9	-2·6	+7·5	+4·7	+4·7	+4·5	+0·4	-0·9	+1·5
11. Punjab, East and North	.	+0·3	+3·6	-3·0	-6·1	+3·8	-1·4	+6·9	+4·8	+2·4	+1·4	-0·1	-1·7	+0·9
12. Do., Southwest	.	+1·3	+3·2	-4·6	-6·8	+4·1	-1·7	+1·1	+2·3	+0·1	+0·6	-0·6	-2·2	-0·3
13. Kashmir	.	-3·3	+2·8	0	-2·6	+8·6	+3·0	+0·3	+1·5	-2·6	-0·3	-6·8	-4·5	-0·4
14. North-West Frontier Province	.	+1·5	+3·1	-4·7	-4·6	+9·1	+1·5	+5·9	+4·7	+0·7	+0·7	-0·5	-4·1	+1·1
15. Baluchistan	.	+0·7	+3·2	-3·4	-4·1	+6·3	-0·9	+0·9	+1·5	-0·9	+0·9	-0·2	-3·8	0
16. Sind	.	0	+1·8	-2·6	-2·8	+0·4	-2·2	+0·5	+0·9	-0·8	+1·5	+1·1	-1·7	-0·3
17. Rajputana, West	.	+0·7	+3·6	-0·5	-4·3	+1·7	-1·9	+2·3	+3·7	+0·9	+1·8	+1·0	-1·6	+0·6
18. Do., East	.	-2·5	+3·1	-0·7	-4·1	+1·0	-1·4	+4·2	+2·4	+1·7	+2·4	+0·4	-2·8	+0·3
19. Gujarat	.	-0·5	+1·2	+0·6	-2·7	-1·1	-0·8	+2·5	+1·9	+0·5	+3·0	+2·6	-0·8	+0·5
20. Central India, West	.	-2·3	+2·9	-0·7	-2·6	+0·9	-1·8	+3·9	+1·3	+1·3	+5·0	+3·9	-0·7	+0·9
21. Do. do., East	.	-2·0	+2·5	-0·5	-3·5	+1·6	-3·4	+7·3	+1·7	+2·9	+8·8	+2·8	-2·1	+0·9
22. Berar	.	-2·3	+1·7	-0·7	-1·0	-1·8	-2·7	+3·5	-0·3	+4·2	+6·5	+4·1	+0·9	+1·0
23. Central Provinces, West	.	-3·1	+1·5	-1·1	-2·2	-0·7	-4·4	+3·9	-0·7	+2·3	+4·1	+2·7	-1·1	+0·1
24. Do. do., East	.	-4·1	+1·7	+0·3	-0·4	-2·7	-8·4	+8·0	-0·8	+2·2	+8·8	+8·0	+0·8	-0·1
25. Konkan	.	+0·6	+0·9	+1·5	-1·1	-2·5	-0·6	+2·2	+1·0	+1·2	+2·0	+1·9	-0·1	+0·6
26. Bombay Deccan	.	-3·3	-0·6	-1·6	-0·1	-4·1	-0·4	+4·4	+1·1	+2·7	+5·0	+2·9	+0·8	+0·5
27. Hyderabad, North	.	-2·6	+1·3	-0·7	+0·2	-3·1	-2·4	+4·3	+0·2	+4·5	+5·5	+5·1	+1·3	+1·1
28. Do., South	.	-4·3	-1·3	-1·7	+0·2	-5·0	-1·6	+5·0	+1·9	+3·1	+4·1	+1·9	+0·5	+0·2
29. Mysore	.	-2·5	-2·3	-1·9	-0·3	-4·7	+0·5	+4·4	+1·9	+2·5	+3·7	+0·4	+0·6	+0·2
30. Malabar	.	-0·7	-1·0	0	-0·1	-4·3	-0·3	+2·4	+0·8	+1·1	+1·7	+0·7	-0·1	-0·1
31. Madras, Southeast	.	-1·6	-2·2	-1·6	-0·2	-2·9	+0·5	+2·6	+1·8	+2·5	+8·4	-0·2	-0·2	+0·2
32. Do., Deccan	.	-4·1	-2·7	-2·7	-1·1	-5·6	-0·5	+8·5	+1·6	+1·2	+4·5	-0·7	-0·8	-0·6
33. Do. Coast, North	.	-2·7	-1·2	-0·4	-0·6	-2·2	-1·2	+2·4	+0·9	+2·5	+2·8	-0·5	+0·2	0

TABLE 15.—*Departure from normal of the monthly and annual minimum temperature in the 33 sub-divisions of India in 1918.*

SUB-DIVISION.	January.	February.	March.	April.	May.	June.	July.	Aksar.	September.	October.	November.	December.	Year.
1. Bay Islands . . . . .	◦	◦	◦	◦	◦	◦	◦	◦	◦	◦	◦	◦	◦
2. Lower Burma . . . . .	-0·1	-2·3	-0·7	-1·3	-1·5	-1·1	+0·9	-0·4	+0·7	-0·2	+0·3	+0·7	-0·4
3. Upper Burma . . . . .	-0·7	-1·6	-0·4	-1·9	-1·5	-0·5	+0·3	-0·6	-0·2	-0·1	+1·3	+0·7	-0·4
4. Assam . . . . .	+0·6	-0·7	+0·2	-1·9	-0·9	-0·8	+0·1	-0·7	+0·1	-0·7	-0·2	+1·2	-0·3
5. Bengal . . . . .	-1·3	-0·2	+2·0	-0·4	+2·1	-0·5	-0·6	-0·3	0	+0·2	-0·3	-0·9	0
6. Orissa . . . . .	-2·1	-1·6	+0·8	-2·0	0	-1·4	+0·4	-0·3	+0·3	-0·5	-0·1	-1·8	-0·7
7. Chota Nagpur . . . . .	-3·2	-3·9	-0·4	-0·9	-1·7	-2·2	+1·1	0	-0·1	-3·1	+3·1	+0·4	-0·9
8. Bihar . . . . .	-3·9	-0·7	+1·5	-1·7	-0·4	-3·5	+1·4	-0·3	-0·7	-3·5	-0·8	-1·5	-1·2
9. United Provinces, East . . . . .	-2·9	0	+1·1	-1·7	+2·2	-2·2	+2·4	+0·1	-1·4	-2·9	-1·5	-1·9	-0·7
10. Do. do., West . . . . .	-2·7	+0·1	-0·1	-3·4	+3·6	-1·4	+2·5	+1·7	-0·6	-1·3	-0·5	-1·6	-0·3
11. Punjab, East and North . . . . .	-2·5	+0·7	-0·3	-4·4	+3·3	-0·3	+3·2	+2·2	0	-0·3	-0·5	+0·1	+0·1
12. Do., Southwest . . . . .	-1·1	+2·2	-0·4	-3·4	+4·0	+0·2	-0·3	+1·3	-1·8	-0·2	-0·6	+0·3	0
13. Kashmir . . . . .	-5·0	+2·6	+2·3	-2·5	+4·0	+3·5	-0·9	+1·1	-2·3	-0·6	-3·4	-1·4	-0·2
14. North-West Frontier Province . . . . .	-3·5	+1·5	-0·1	-2·7	+4·1	+1·0	+0·6	+1·9	-1·1	-0·5	+0·3	+1·1	+0·2
15. Baluchistan . . . . .	-5·5	+0·3	-0·3	-2·7	+4·1	-3·5	-3·2	-0·4	+0·2	-0·3	-2·7	-1·7	-1·3
16. Sind . . . . .	-2·6	+1·8	+0·5	-2·3	+1·3	-0·7	-0·5	-0·6	-0·9	-0·2	+0·1	-0·7	-0·4
17. Rajputana, West . . . . .	-3·3	+0·7	-1·3	-5·7	-0·1	-1·9	-0·9	-0·5	-2·3	-1·7	+1·4	-1·6	-1·4
18. Do., East . . . . .	-2·8	+1·5	+0·1	-4·3	+2·7	-1·0	+0·9	+0·7	-0·1	+0·6	+0·2	-2·5	-0·3
19. Gujarat . . . . .	-1·2	-0·1	+0·5	-3·0	+1·1	-0·8	0	+0·7	-1·0	-1·4	+2·1	-0·4	-0·3
20. Central India, West . . . . .	-2·3	+1·7	-0·3	-3·5	+1·7	-0·9	+0·6	+0·9	-1·2	-1·2	+3·3	-1·1	-0·3
21. Do. do., East . . . . .	-5·1	-0·8	-0·1	-3·5	+3·1	-1·9	+2·8	+0·9	-1·1	-2·8	+0·5	-0·6	-0·7
22. Berar . . . . .	-1·9	+1·7	+0·2	-1·5	-0·8	-1·2	+0·7	+0·6	+1·3	-1·2	+3·4	+2·9	+0·3
23. Central Provinces, West . . . . .	-3·1	+1·2	0	-2·0	+1·7	-2·3	+0·5	-0·2	-0·4	-2·4	+1·4	+0·7	-0·4
24. Do. do., East . . . . .	-3·2	+0·2	+0·3	-1·5	+0·1	-4·1	+0·6	0	0	-3·6	+0·6	+1·0	-0·8
25. Konkan . . . . .	+0·5	+0·3	+0·9	-2·1	-1·6	-0·2	+1·3	+0·9	+0·5	+0·8	+3·1	+1·2	+0·5
26. Bombay Deccan . . . . .	-0·6	+0·5	-0·8	-2·1	-0·6	-1·3	-0·4	+0·5	-0·3	-0·4	+4·4	+3·7	+0·2
27. Hyderabad, North . . . . .	-1·1	-0·7	+0·4	-0·8	-1·9	-1·5	+0·6	+0·1	+0·8	-4·1	+3·7	+5·3	+0·1
28. Do., South . . . . .	-0·4	-0·7	-1·5	-0·7	-3·6	-1·3	+1·3	+0·3	+0·9	-0·4	+4·8	+3·2	+0·2
29. Mysore . . . . .	+0·6	-2·2	-1·7	-1·0	-0·6	-1·0	-0·2	+0·3	+0·2	+0·7	+4·1	+2·2	+0·1
30. Malabar . . . . .	+0·5	-1·8	-0·3	0	-2·1	+0·1	+1·5	-0·1	+0·3	+0·9	+1·7	+1·0	+0·1
31. Do., Southeast . . . . .	+0·6	-3·3	-1·9	-0·4	-0·6	-0·4	+0·9	+1·1	+1·1	+0·7	+2·6	+1·2	+0·1
32. Madras Deccan . . . . .	+1·4	-1·9	-1·8	+0·3	-1·9	-0·4	+0·6	+0·8	+0·7	+0·4	+5·3	+2·6	+0·5
33. Do. Coast, North . . . . .	+0·1	-2·7	-1·1	-0·8	-1·6	-1·6	+0·7	0	+0·2	-0·6	+3·1	+1·9	-0·8

TABLE 16.—*Departure from normal of the mean monthly and annual mean temperature in the 33 sub-divisions of India in 1918.*

Sub-Division.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Year.
	°	°	°	°	°	°	°	°	°	°	°	°	°
1. Bay Islands . . . . .	-1.0	-2.4	-1.0	-0.8	-1.7	-1.2	+0.2	-0.6	+0.3	-0.7	-0.1	+0.2	-0.7
2. Lower Burma . . . . .	-1.7	-1.7	-0.5	-1.7	-2.4	-0.2	+0.5	-0.5	-0.5	+0.1	+1.5	+0.8	-0.5
3. Upper Burma . . . . .	-0.3	-0.5	-0.1	-1.7	-2.3	-1.3	+0.1	-0.9	-0.3	-1.0	-0.3	+0.5	-0.7
4. Assam . . . . .	-0.3	+0.1	+0.5	-0.3	+2.1	-1.2	-1.3	-0.5	-0.1	+0.3	-0.2	-0.3	-0.1
5. Bengal . . . . .	-1.8	-0.1	+0.9	-2.3	-1.3	-2.5	+0.7	-0.6	+0.5	+0.3	+0.7	-1.3	-0.5
6. Orissa . . . . .	-3.1	-1.7	+0.1	-1.3	-2.3	-3.3	+2.3	-0.2	+0.6	0	+2.5	+0.8	-0.5
7. Chota Nagpur . . . . .	-3.5	+0.4	+1.8	-1.5	-2.0	-5.3	+2.7	-0.6	+0.3	+0.1	+0.7	-0.5	-0.6
8. Bihar . . . . .	-1.6	+0.9	+0.7	-3.0	-1.9	-3.7	+2.1	-1.3	+0.1	+0.2	-0.1	-1.1	-0.7
9. United Provinces, East . . . . .	-1.7	+1.5	+0.5	-2.4	-0.3	-3.7	+4.5	+0.6	+0.5	+0.5	+0.1	-1.0	-0.1
10. United Provinces, West . . . . .	-1.7	+1.8	-0.3	-3.6	+2.7	-2.0	+5.0	+3.2	+2.1	+1.6	-0.1	-1.3	+0.6
11. Punjab, East and North . . . . .	-1.1	+2.1	-1.7	-5.5	+3.5	-0.9	+5.1	+3.5	+1.2	+0.6	-0.3	-0.8	+0.5
12. Punjab, Southwest . . . . .	+0.1	+2.7	-2.5	-5.1	+4.1	-0.7	+0.4	+1.8	-0.9	+0.1	-0.6	-0.9	-0.1
13. Kashmir . . . . .	-4.1	+2.7	+1.1	-2.5	+6.3	+3.3	-0.3	+1.3	-2.5	-0.7	-5.1	-2.9	-0.3
14. North-West Frontier Province . . . . .	-1.0	+2.3	-2.4	-2.7	+6.6	+1.3	+3.3	+3.3	-0.2	+0.1	-0.1	-1.5	+0.7
15. Baluchistan . . . . .	-2.4	+1.7	-1.9	-3.4	+5.1	-2.2	-1.1	+0.5	-0.3	+0.3	-1.5	-2.7	-0.7
16. Sind . . . . .	-1.3	+1.8	-1.1	-2.5	+0.9	-1.5	0	+0.1	-0.9	+0.7	+0.6	-1.2	-0.4
17. Rajputana, West . . . . .	-1.3	+2.1	-0.9	-5.0	+0.8	-1.9	+0.7	+1.6	-0.7	+0.1	+0.7	-1.6	-0.5
18. Rajputana, East . . . . .	-2.7	+2.3	-0.3	-4.2	+1.9	-1.2	+2.5	+1.5	+0.8	+1.5	+0.3	-2.7	0
19. Gujarat . . . . .	-0.9	+0.5	+0.5	-2.9	0	-0.8	+1.3	+1.3	-0.3	+0.8	+2.3	-0.6	+0.1
20. Central India, West . . . . .	-2.3	+2.3	-0.5	-3.1	+1.3	-1.3	+2.3	+1.1	+0.1	+1.9	+3.6	-0.9	+0.4
21. Central India, East . . . . .	-3.5	+0.9	-0.3	-3.5	+2.3	-2.7	+5.1	+1.3	+0.9	-0.5	+1.4	-1.3	+0.1
22. Berar . . . . .	-2.1	+1.7	-0.3	-1.3	-1.3	-1.9	+2.1	+0.1	+2.7	+2.7	+3.7	+1.9	+0.7
23. Central Provinces, West . . . . .	-3.1	+1.3	-0.5	-2.1	+0.5	-3.3	+2.2	-0.5	+0.9	+0.9	+2.1	-0.2	-0.1
24. Central Provinces, East . . . . .	-3.7	+0.9	+0.3	-0.9	-1.3	-6.3	+1.8	-0.4	+1.1	+0.1	+1.8	+0.9	-0.5
25. Konkan . . . . .	+0.5	+0.6	+1.2	-1.6	-2.1	-0.4	+1.7	+0.9	+0.9	+1.4	+2.5	+0.6	+0.5
26. Bombay Deccan . . . . .	-1.9	-0.1	-1.2	-1.1	-2.3	-0.9	+2.0	+0.8	+1.2	+2.3	+3.7	+2.3	+0.4
27. Hyderabad, North . . . . .	-1.9	+0.3	-0.1	-0.3	-2.5	-1.9	+2.5	+0.1	+2.7	+0.7	+4.4	+3.3	+0.6
28. Hyderabad, South . . . . .	-2.3	-1.0	-1.6	-0.3	-4.3	-1.5	+3.1	+1.1	+2.0	+1.9	+3.3	+1.9	+0.2
29. Mysore . . . . .	-0.9	-2.3	-1.6	-0.7	-2.7	-0.3	+2.1	+1.1	+1.3	+2.2	+2.3	+1.8	+0.1
30. Malabar . . . . .	-0.1	-1.4	-0.1	-0.1	-3.2	-0.1	+1.9	+0.3	+0.7	+1.3	+1.2	+0.5	+0.1
31. Madras, Southeast . . . . .	-0.4	-2.7	-1.7	-0.3	-1.7	+0.1	+1.7	+1.5	+1.8	+2.1	+1.2	+0.5	+0.2
32. Madras, Deccan . . . . .	-1.3	-2.3	-2.3	-0.4	-3.7	-0.5	+2.1	+1.2	+0.9	+2.5	+2.3	+0.9	-0.1
33. Madras, Coast, North . . . . .	-1.3	-1.9	-0.7	-0.7	-1.9	-1.4	+1.5	+0.5	+1.3	+1.1	+1.3	+1.1	-0.1

## Atmospheric pressure.

Full information regarding the types of barometers in use at Indian observatories and of the methods of reducing the observations and obtaining the mean daily and monthly pressures will be found on page 5 of the Monthly Review for January 1918.

In Table A, called Table II prior to 1907, of each Monthly Review, the monthly mean daily pressure (corrected for temperature) is given in the seventh column, and the departure from the normal in the eighth column. The normal monthly mean pressure values were recalculated in 1904 for all first and second class stations, and will be found in pages 66-69 of the "Indian Meteorological Memoirs," Volume XVII. The departure data in the Monthly Reviews for the year 1918 were obtained by a comparison of the actual monthly means with these normals; the departures of the monthly pressure of all first and second class stations in 1918 are given in Table 17. The figures in the seventh and eighth columns of Table A, appended to the present Annual Summary, giving data of the mean pressure of the air and its departure from the normal for all first and second class stations are comparable with the corresponding data of

previous years published in the Annual Reports and Annual Summaries.

In the ninth column of Table A in each Monthly Review are given the mean pressures reduced to sea-level and corrected to constant gravity (Lat. 45°). These are not directly comparable with the sea-level pressure values of the years 1875-90 as given in the Annual Reports for those years, for previous to 1891 no correction was made to reduce the monthly pressure means to standard gravity.

In Table B of each monthly Review, and also in that appended to the Annual Summary, are given the pressure data for 8 hours local time. The fourth column in that table gives the mean 8 hours pressures for the month corrected for temperature. In the fifth column are given the departures of these mean 8 hours pressures from the normal pressures.

The greater part of the normal 8 hours monthly means of pressure used in Table B have been deduced from the barometric observations of the whole of the twenty-two years' period 1888-1910, and in all except 24 cases the periods employed equalled or exceeded five years.

TABLE 17.—Departure from normal of monthly and annual mean pressure of first and second class stations in 1918.

DIVISION.	STATION.	JANUARY.	FEBRUARY.	MARCH.	APRIL.	MAY.	JUNE.	JULY.	AUGUST.	SEPTEMBER.	OCTOBER.	NOVEMBER.	DECEMBER.	YEAR.
Bengal . . .	Calcutta . . .	" +·007	" +·014	-·013 +·016	-·068 +·002	+·014 -·032	-·010 +·035	" -·016 +·009	" -·003	"	"	"	"	
Punjab . . .	Lahore . . .	+·030	+·029	+·015 +·040	-·112 -·034	-·014 -·043	+·010 +·025	-·016 +·024	-·004					
Rajputana . . .	Jaipur . . .	+·033	+·035	+·018 +·034	-·073 0	+·049 -·007	+·046 +·037	-·007 +·035	+·016					
Bombay . . .	Bombay . . .	-·026	+·031	0 +·020	-·08 +·018	+·030 +·006	+·056 +·030	-·050 +·008	+·010					
Mysore . . .	Bangalore . . .	-·025	+·048	+·017 +·024	-·027 +·020	+·047 +·018	+·037 +·040	-·023 +·022	+·016					
Madras . . .	Madras . . .	-·049	+·040	+·010 +·001	-·040 +·019	+·028 -·004	+·022 +·044	-·049 +·008	+·002					
Hill Stations, excluding Kashmir and Baluchistan.	Kathmandu . . .	-·0·8	+·009	+·018 +·036	+·010 +·024	+·019 +·008	+·040 +·039	+·001 +·018	+·018					
Extra India . . .	Seychelles . . .	-·001	+·039	+·018 +·007	-·021 +·029	+·010 +·039	+·021 +·029	-·004 +·004	+·026	+·016				
	Mauritius . . .	-·009	+·030	-·018 -·051	-·012 +·024	+·039 +·030	+·057 +·006	0 +·018	+·012					

TABLE 18.—*Departure from normal of the mean monthly and annual pressure in the fifteen chief political divisions of India in 1918.*

Division.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Year.
Burma . . . . .	" +·012	+·030	+·012	+·011	-·042	-·020	-·008	-·008	+·015	+·034	-·001	-·010	+·007
Assam . . . . .	+·012	+·006	-·001	+·006	-·076	-·005	-·010	-·019	-·00	+·042	+·009	+·012	-·002
Bengal . . . . .	+·015	+·013	-·001	+·021	-·066	-·001	+·006	-·028	-·007	+·069	+·001	+·012	0
Bihar and Orissa . . . . .	+·02	+·021	+·003	+·17	-·063	+·001	+·026	-·020	+·013	+·049	-·003	+·020	+·007
United Provinces . . . . .	+·033	+·022	+·012	+·027	-·075	+·007	+·018	-·022	+·015	+·042	-·001	+·027	+·009
Punjab . . . . .	+·039	+·039	+·010	+·04	-·098	-·019	+·002	-·033	+·013	+·038	-·000	+·025	+·003
North-West Frontier Province . . . . .	+·033	+·045	-·001	+·027	-·141	-·087	-·013	-·058	+·010	+·032	-·09	+·027	-·007
Sind . . . . .	+·037	+·038	+·16	+·040	-·083	-·001	+·053	-·020	+·044	+·038	-·017	+·038	+·015
Rajputana . . . . .	+·036	+·042	+·003	+·032	-·072	+·005	+·061	-·010	+·047	+·033	-·020	+·037	+·016
Bombay . . . . .	-·010	+·025	+·002	+·016	-·03	+·022	+·076	-·02	+·051	+·033	-·045	+·013	+·009
Central India . . . . .	+·027	+·037	+·013	+·022	-·083	+·011	+·059	-·013	+·046	+·040	-·019	+·019	+·013
Central Provinces . . . . .	+·016	+·037	+·011	+·13	-·075	+·011	+·059	-·005	+·052	+·047	-·024	+·011	+·013
Hyderabad . . . . .	-·006	+·041	+·011	+·005	-·057	+·29	+·068	+·010	+·052	+·052	-·032	+·007	+·015
Mysore . . . . .	-·031	+·040	+·009	+·009	-·059	+·025	+·48	+·015	+·040	+·037	-·038	+·015	+·009
Madras . . . . .	-·036	+·043	+·011	+·009	-·046	+·022	+·037	+·009	+·038	+·041	-·042	+·009	+·0·8
Mean of India . . . . .	+·013	+·033	+·008	+·019	-·070	+·011	+·035	-·013	+·031	+·040	-·018	+·017	+·003

### Storms.

Five storms occurred in the Bay of Bengal during the year. The dates on which they occurred and their intensities are given below; other details about them have been given in the weather reviews of the respective months. There were no disturbances in the Arabian Sea which could be classed as storms.

Month,	Date.	Greatest observed barometric depth.	Intensity.
January . . .	14-18	4"	Moderate.
May . . .	24-25	0·3"	Moderate.
November . . .	10-11	0·4"	Moderate.
November . . .	17-19	0·4"	Moderate.
December . . .	8-11	0·4"	Moderate.

### Surface and upper air winds.

**Surface.**—The mean direction of the wind and the mean diurnal movement of the air as measured by Robinson anemometers are given for all second class stations in Table A in each Monthly Weather Review. The normal values are also stated for the sake of ready comparison. The normal data of these elements, utilized in Table A of the Monthly Weather Reviews of the year 1918, will be found in a collected form in Tables XXII, XXVI and XXVII of Vol. XVII of Indian Meteorological Memoirs. The mean 8 hours wind directions for each month are charted in the first plate and are given in Table B, in each Monthly Review; they are calculated in the usual manner by finding the resultant, irrespective of velocity, of the directions actually observed each day at 8 hours. As a general rule, the mean 8 hours wind directions vary little from the mean wind directions (calculated from the 10 and 16 hours mean wind data) in Table A of the Monthly Reviews, but in some areas and at certain seasons of

the year they differ very considerably. The normal values used in Table B have been published in Volume XVII of the departmental Memoirs.

Up to 1911 the factor representing the ratio of air movement to travel of Beckley cups had in India, as in other countries, been taken as 3·0; but as in that year it had been generally accepted that the factor should be 2·2, the change to 2·2 was made in the Monthly Weather Review of January 1912 (see note on page 8 there).

The monthly peculiarities of the air movement have already been dealt with in the Monthly Weather Reviews.

**Upper air.**—Tables 19 to 23 give the monthly mean velocities and directions at different heights above Agra, Simla, Lahore, Kojak and Bangalore during 1918. The results are based upon observations of balloons by a single theodolite, heights being determined by the tail method. Details of the method with the results obtained up to the end of 1917 will be published in a separate memoir.

TABLE 19.—*Monthly means of wind direction and velocity of upper winds in 1918 at Agra (height above sea level 0.17 Km.)*

Height above sea level Kms.	JANUARY.				FEBRUARY.				MARCH.				APRIL.				MAY.				JUNE.			
	n	V	v	L	n	V	v	L	n	V	v	L	n	V	v	L	n	V	v	L	n	V	v	L
0.5	38	6.0	3.5	331	31	6.5	5.0	326	29	7.5	4.4	319	29	9.0	4.9	342	28	8.0	3.3	270	29	7.5	3.1	227
1.0	33	6.5	3.6	327	31	7.5	6.3	312	29	8.5	5.6	304	29	9.0	5.4	329	28	8.5	5.7	299	29	8.1	5.0	276
1.5	33	6.5	3.5	309	31	8.5	7.5	299	29	8.5	6.8	299	29	9.0	6.7	312	28	8.0	7.7	318	29	6.8	5.5	306
2.0	32	6.5	3.4	297	30	9.5	8.6	295	29	8.5	7.4	293	29	9.0	8.1	298	28	8.0	7.8	320	28	7.0	6.1	325
2.5	31	7.0	4.4	295	30	10.0	9.3	289	28	9.5	8.5	288	29	10.5	9.4	287	28	7.5	7.2	318	28	7.0	5.8	333
3.0	31	8.0	5.8	285	29	11.5	10.6	280	28	10.5	9.2	280	29	11.0	9.7	279	28	7.0	6.8	321	28	7.1	5.9	334
3.5	32	9.5	8.3	277	29	13.5	12.7	276	28	11.5	10.5	277	29	11.0	9.7	280	25	7.5	7.0	317	28	7.5	6.3	334
4.0	31	11.5	10.3	274	29	16.5	15.3	275	28	13.0	11.9	277	29	12.5	10.3	276	26	8.0	7.5	314	27	6.9	5.2	335
4.5	31	14.0	13.1	272	28	19.0	17.8	272	27	14.5	13.6	278	29	13.0	12.2	272	25	8.0	7.2	313	26	6.6	3.7	331
5.0	31	17.0	15.9	270	26	21.0	20.0	272	26	15.5	14.2	277	29	15.0	14.2	271	24	8.5	6.1	320	25	5.6	2.2	316
5.5	31	20.5	18.9	270	26	24.5	23.0	272	24	16.0	14.6	279	26	16.5	15.8	278	23	9.0	6.0	325	25	6.3	2.1	276
6.0	31	23.0	21.2	268	24	27.5	26.0	270	22	18.5	15.2	281	26	17.5	16.6	275	23	9.0	5.0	330	25	5.7	2.3	248
6.5	29	26.5	24.6	269	23	29.0	27.4	268	22	18.0	16.7	276	23	17.5	16.6	274	20	8.0	4.2	331	23	5.5	1.7	236
7.0	25	38.0	26.2	267	20	31.0	29.3	272	19	17.5	15.7	282	18	19.0	18.3	272	19	8.5	4.0	336	22	4.6	1.0	204
7.5	18	30.0	29.1	271	15	32.5	30.8	270	18	19.0	17.2	275	15	20.0	19.2	276	17	8.0	3.2	345	22	5.1	1.0	226
8.0	15	30.0	29.3	274	10	32.5	30.6	269	18	20.0	18.1	276	14	19.5	19.2	276	16	8.0	2.5	343	21	4.9	1.2	194
8.5	11	33.0	32.6	278	5	29.0	27.4	275	15	21.5	19.4	275	12	18.5	17.9	276	16	8.0	2.8	344	19	5.3	1.0	186
9.0	9	34.0	33.2	276	2	30.0	29.8	265	14	23.0	21.1	275	12	21.5	19.6	276	16	8.0	3.4	329	19	5.1	0.9	156
9.5	2	30.0	28.5	296	...	...	...	7	21.5	19.6	279	10	21.0	20.5	276	15	7.5	3.9	337	19	5.4	0.9	159	
10.0	1	34.5	34.5	315	...	...	...	3	12.0	10.0	285	9	23.5	22.6	272	15	7.5	3.9	320	17	5.6	2.0	178	
10.5	1	37.5	37.5	315	...	...	...	3	12.5	10.5	282	5	21.0	20.8	285	16	7.0	3.3	319	17	5.6	1.8	179	
11.0	1	39.5	39.5	310	...	...	...	3	13.0	11.0	285	3	20.0	19.3	286	14	7.0	5.2	328	14	5.7	1.3	164	
11.5	...	...	...	...	...	...	...	3	18.0	14.7	281	2	21.0	21.0	287	11	8.0	5.8	331	13	5.6	1.4	174	
12.0	...	...	...	...	...	...	...	2	14.5	13.5	276	...	...	...	...	10	7.5	5.2	319	13	5.8	1.3	161	
12.5	...	...	...	...	...	...	...	1	22.5	22.5	245	...	...	...	...	8	5.5	2.8	4	11	5.1	1.0	203	
13.0	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8	6.0	3.6	12	10	5.2	2.0	158	
13.5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6	6.5	3.3	7	5.9	3.0	1.6	158	
14.0	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6	6.5	4.2	9	6.4	3.2	1.6	158	
14.5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5	6.0	3.1	254	...	...	...	...	
15.0	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	10.5	8.0	308	...	...	...	...	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	

\* n=Number of flights.  
V=Velocity of wind, regardless of direction, metre per second.  
v=Velocity of Resultant Wind; taking account of direction, metre per second.  
L=Direction of Resultant Wind; North wind=0° or 360°, East wind=90°.

TABLE 19.—*Monthly means of wind direction and velocity of upper winds in 1918 at Agra (height above sea level 0.17 Km.)—concl.*

Height above sea level Kms.	JULY.				AUGUST.				SEPTEMBER.				OCTOBER.				NOVEMBER.				DECEMBER.			
	n	V	v	L	n	V	v	L	n	V	v	L	N	V	v	L	n	V	v	L	n	V	v	L
0.5	30	9.0	7.4	267	23	8.0	5.7	276	33	9.3	8.6	287	32	5.5	0.8	268	28	5.0	1.7	360	30	5.5	4.5	334
1.0	30	8.8	7.3	288	23	8.5	6.0	298	34	9.2	7.9	320	32	5.5	1.0	306	28	5.0	2.2	331	31	5.5	5.0	322
1.5	29	7.1	5.8	306	23	8.0	4.4	313	34	6.4	5.8	319	32	5.5	4.2	296	28	5.0	3.8	316	31	6.0	5.0	309
2.0	29	5.0	3.8	321	22	6.5	2.7	332	34	5.8	4.7	320	32	6.0	5.5	303	28	6.0	4.8	306	31	7.0	5.2	302
2.5	29	4.9	2.8	315	20	5.0	2.6	323	31	5.4	4.0	321	31	6.5	6.0	304	28	6.5	5.6	310	31	7.5	5.6	294
3.0	29	5.3	2.9	312	18	5.0	2.4	332	29	4.9	3.6	323	30	6.5	5.8	308	27	7.5	6.2	310	31	7.5	6.3	281
3.5	28	5.3	3.1	323	17	5.0	2.2	1	29	5.2	3.4	316	31	6.5	5.9	303	27	7.5	6.4	300	31	9.5	8.2	274
4.0	28	5.3	2.8	317	18	5.0	2.3	343	27	5.2	3.0	295	30	7.5	6.3	299	26	8.5	7.4	287	31	12.0	10.9	273
4.5	28	5.0	2.7	316	17	5.0	2.7	342	26	6.8	4.8	257	29	8.0	7.1	294	26	9.0	8.4	282	31	14.0	13.1	271
5.0	28	5.3	2.6	311	17	5.0	2.0	26	24	7.7	6.0	242	29	9.5	9.0	286	26	10.5	10.3	279	31	17.0	16.2	271
5.5	27	5.0	2.0	300	16	5.0	2.8	30	24	8.4	7.0	234	29	11.5	11.0	283	26	12.5	12.2	276	29	20.0	19.1	270
6.0	26	6.1	1.8	233	16	5.0	2.6	26	23	9.4	7.7	235	29	14.0	13.2	281	26	15.0	14.2	274	29	24.0	22.7	267
6.5	24	5.8	1.7	232	16	5.0	3.1	11	22	10.8	9.1	237	29	16.0	15.5	280	26	17.5	16.9	274	28	27.0	26.3	266
7.0	24	5.3	1.4	239	16	6.0	3.0	44	22	11.7	9.9	237	28	18.5	17.8	274	26	20.0	19.6	274	27	30.5	29.6	266
7.5	21	5.8	1.4	221	16	6.5	4.0	67	21	12.2	10.2	241	28	20.5	19.6	274	26	24.0	23.4	273	23	32.0	30.7	268
8.0	20	6.2	1.1	194	15	6.5	4.1	69	21	12.9	11.3	246	24	22.5	22.0	272	26	27.0	26.0	271	22	36.0	36.0	269
8.5	20	6.8	2.4	190	15	7.5	4.7	73	21	14.5	11.3	246	22	24.5	23.7	271	24	29.1	28.7	274	15	40.5	38.6	270
9.0	20	7.4	2.1	208	13	7.5	5.8	92	21	12.8	11.6	245	18	24.0	23.6	271	21	31.5	31.0	275	9	42.0	40.7	277
9.5	19	7.5	2.1	228	13	6.0	6.5	99	18	11.9	10.1	242	15	25.0	24.2	270	19	34.0	34.0	274	5	44.5	43.8	270
10.0	17	7.4	1.2	201	13	7.5	5.6	97	15	11.0	9.6	235	11	26.5	26.1	277	15	37.0	36.5	273	2	37.0	36.5	270
10.5	17	7.3	1.0	216	11	7.0	6.1	110	12	10.1	8.7	228	8	28.5	28.5	272	10	38.5	38.2	271	2	40.0	39.8	263
11.0	17	7.6	0.8	212	11	7.5	6.0	114	10	7.8	5.6	226	8	32.0	31.6	272	4	37.5	37.5	281	1	43.0	43.0	270
11.5	14	7.2	1.7	159	11	8.0	6.0	120	9	8.9	5.9	219	2	28.5	28.5	270	3	45.0	45.0	281	1	51.5	51.5	270
12.0	13	8.1	2.0	167	10	9.0	6.7	114	9	9.3	6.3	221	1	26.0	26.0	275	1	52.5	52.5	280	...	...	...	...
12.5	12	8.8	2.7	150	10	9.0	6.8	113	9	9.5	6.4	213	1	28.5	28.5	270	1	62.5	62.5	280	...	...	...	...
13.0	10	9.8	4.6	139	10	9.0	7.4	109	9	10.0	6.8	221	1	31.0	31.0	275	1	57.5	57.5	275	...	...	...	...
13.5	5	14.8	7.2	135	8	9.0	7.3	111	6	8.3	4.7	195	...	...	...	...	...	...	...	...	...	...	...	
14.0	4	15.4	8.0	126	6	9.5	9.2	91	3	10.8	6.7	183	...	...	...	...	...	...	...	...	...	...	...	
14.5	1	24.0	24.0	140	1	5.0	5.0	45	1	20.0	20.0	200	...	...	...	...	...	...	...	...	...	...	...	
15.0	1	25.0	25.0	140	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
15.5	1	26.0	26.0	140	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	

n=Number of flights.

V=Velocity of wind, regardless of direction, metre per second.

v=Velocity of Resultant Wind; taking account of direction, metre per second.

L=Direction of Resultant Wind; North wind=0° or 360°; East wind=90°.

TABLE 20.—*Monthly means of wind direction and velocity of upper winds in 1918 at Simla (height above sea level 2,133 Kms.)*

Height above sea level Kms.	JANUARY.				FEBRUARY.				MARCH.				APRIL.				MAY.				JUNE.			
	n	V	v	L	n	V	v	L	n	V	v	L	n	V	v	L	n	V	v	L	n	V	v	L
2·13	20	1·7	0·6	10·1	20	1·7	1·0	8	22	2·0	0·4	11	24	2·0	0·9	26	31	1·5	0·9	333	20	1·2	0·7	3·7
2·3	20	4·1	0·4	100	19	3·9	2·2	341	22	4·9	2·2	358	23	6·6	3·2	358	31	5·5	4·5	325	20	5·1	3·7	318
2·5	20	3·9	0·3	192	20	3·8	1·7	318	22	5·0	1·8	342	23	7·1	4·0	344	31	7·3	7·0	316	20	6·8	5·6	314
3·0	20	5·0	0·8	201	20	4·3	1·1	337	21	5·0	0·7	298	24	5·7	2·9	316	31	9·5	9·3	310	20	8·7	8·3	315
3·6	20	5·3	0·8	228	20	5·4	2·6	315	21	5·5	2·2	288	23	6·8	2·9	307	31	10·5	10·4	310	18	8·3	7·9	313
4·0	19	5·8	2·1	260	20	6·9	4·6	297	20	5·4	2·8	293	22	7·6	4·3	297	29	10·8	10·2	311	14	7·3	7·1	315
4·5	19	6·9	3·6	261	19	9·3	7·5	290	20	6·5	5·1	290	19	7·1	4·8	272	27	11·5	10·4	313	12	6·8	5·5	314
5·0	15	10·3	7·1	246	18	13·4	12·1	284	18	8·9	7·9	288	19	9·3	7·6	200	23	9·6	8·0	319	11	6·9	4·6	301
5·5	12	13·7	10·4	275	17	17·5	15·6	283	17	12·7	11·6	281	17	11·5	10·6	288	18	7·9	5·4	322	11	7·1	4·2	259
6·0	10	16·5	14·1	264	15	20·5	18·6	277	17	15·4	14·4	279	17	14·0	13·2	269	18	1·1	7·1	322	8	7·9	5·8	265
6·5	10	17·9	16·2	268	13	19·7	18·4	270	16	16·5	15·0	275	15	17·8	16·7	267	17	12·3	9·0	318	8	8·6	6·9	267
7·0	8	19·0	18·2	272	12	22·3	21·3	270	15	17·5	15·5	273	13	19·8	19·0	273	16	13·9	9·5	319	8	10·4	8·1	248
7·5	7	26·1	23·0	271	12	26·3	25·3	271	13	18·0	16·4	277	11	21·7	20·9	274	16	15·0	10·0	314	7	18·6	11·5	239
8·0	5	29·0	26·5	256	10	31·2	30·3	288	13	21·8	20·0	278	10	26·1	24·1	276	15	14·9	9·3	308	7	13·0	10·3	245
8·5	5	37·9	35·4	259	8	35·9	35·4	264	11	25·6	24·3	272	8	25·3	24·4	288	14	14·6	8·9	299	6	18·9	11·2	266
9·0	4	39·9	34·0	260	7	41·6	41·3	285	8	28·3	26·7	281	6	19·0	18·3	288	14	15·6	10·3	297	5	16·3	12·4	262
9·5	2	30·7	28·5	307	5	43·0	42·8	268	4	14·5	14·1	291	6	20·9	20·1	287	12	13·0	9·5	286	5	10·2	12·4	246
10·0	2	35·5	35·5	310	4	43·6	43·5	270	4	14·6	14·2	287	6	24·7	23·7	289	10	12·3	10·1	281	4	17·6	13·3	234
10·5	...	...	—	...	2	41·5	41·3	271	3	14·8	14·6	299	5	28·0	27·0	286	10	10·9	10·2	281	4	17·6	13·0	241
11·0	...	...	...	...	2	51·0	50·9	272	3	17·8	17·4	289	3	27·2	26·0	280	10	11·4	10·5	290	4	18·7	13·3	250
11·5	...	...	...	...	...	...	...	...	3	24·5	23·3	283	2	31·0	29·2	276	10	13·4	11·8	289	1	20·5	20·5	255
12·0	...	...	...	...	...	...	...	...	2	20·5	20·1	263	2	37·3	35·1	275	8*	11·2	9·9	295	1	23·0	23·0	256
12·5	...	...	...	...	...	...	...	...	2	22·7	22·5	256	1	26·5	26·5	300	5	7·6	6·3	294	...	...	...	...
13·0	...	...	...	...	...	...	...	...	1	15·0	15·0	270	1	25·5	25·5	306	4	4·1	1·9	270	...	...	...	...
13·5	...	...	...	...	...	...	...	...	1	17·0	17·0	275	1	30·0	30·0	295	4	4·5	3·6	281	...	...	...	...
14·0	...	...	...	...	...	...	...	...	1	18·5	18·5	270	1	39·5	39·5	290	4	4·4	2·8	270	...	...	...	...
14·5	...	...	...	...	...	...	...	...	1	20·0	20·0	275	...	...	...	...	3	5·0	3·8	281	...	...	...	...
15·0	...	...	...	...	...	...	...	...	1	21·5	21·5	275	...	...	...	...	3	7·3	6·7	280	...	...	...	...
15·5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	17·5	17·5	270	...	...	...	...
16·0	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	22·0	22·0	270	...	...	...	...
16·5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	26·0	26·0	270	...	...	...	...

n=Number of flights.

V=Velocity of wind, regardless of direction, metre per second.

v=Velocity of Resultant Wind; taking account of direction, metre per second.

L=Direction of Resultant Wind; North wind=0° or 360°; East wind=90°.

TABLE 20.—*Monthly means of wind direction and velocity of upper winds in 1918 at Simla (height above sea level 213 Kms.)—concl.*

Height above Sea level Kms.	JULY.				AUGUST.				SEPTEMBER.				OCTOBER.				NOVEMBER.				DECEMBER.			
	n		b	V	n	L	v	L	n	V	v	L	n	V	v	L	n	V	v	L	n	V	v	L
2.13	18	1.6	1.0	334	15	1.6	1.5	331	20	2.7	2.4	338	30	2.0	1.0	34	20	1.7	0.2	350	25	1.6	0.4	34
2.3	18	4.0	2.7	321	16	4.1	3.5	333	28	6.5	5.6	340	28	5.1	3.7	333	20	3.5	1.8	354	25	2.4	0.4	33
2.5	18	4.8	3.0	319	15	4.9	4.4	326	30	7.2	5.9	331	29	5.6	4.4	324	28	4.5	2.0	341	25	3.0	0.6	32
3.0	18	6.2	5.7	315	15	6.2	5.4	320	28	5.6	4.2	323	29	4.5	3.0	318	27	5.0	1.0	317	24	4.0	0.8	176
3.5	16	5.6	4.7	313	13	5.8	5.2	313	28	3.8	1.7	332	29	5.1	3.3	314	28	4.9	2.8	303	24	5.1	1.5	231
4.0	12	4.2	2.9	300	11	5.2	4.5	317	26	3.7	1.3	142	30	5.6	3.2	206	27	5.7	4.7	207	23	6.4	2.0	255
4.5	10	4.1	2.8	279	11	4.9	4.1	314	26	3.9	1.7	158	30	7.0	5.1	201	27	6.7	5.6	285	23	7.7	5.1	289
5.0	10	3.9	2.6	248	8	3.8	2.3	301	24	4.7	2.7	197	28	8.4	6.8	285	26	8.4	7.3	280	24	8.7	7.4	275
5.5	9	6.3	4.0	248	9	4.8	2.7	260	23	6.6	4.9	228	27	10.8	9.0	277	26	10.2	9.1	279	23	12.2	10.5	271
6.0	7	6.2	5.6	207	9	6.5	2.7	267	23	8.3	7.3	231	26	12.1	11.3	276	25	14.2	12.9	272	19	15.1	13.5	270
6.5	5	6.9	6.2	236	9	6.4	3.0	245	22	9.5	8.6	236	22	14.3	13.5	274	20	16.0	14.6	268	15	17.4	15.8	262
7.0	5	8.1	7.8	216	8	6.9	4.8	246	22	12.3	11.5	241	20	17.1	16.4	272	16	18.9	18.3	271	15	19.8	18.2	264
7.5	5	9.7	9.1	214	7	6.4	4.7	255	19	16.0	15.6	243	20	20.4	19.3	271	14	21.1	20.2	274	13	23.7	21.4	261
8.0	5	10.0	9.7	226	7	7.3	8.0	155	16	18.8	18.0	243	14	24.1	23.3	270	12	24.9	24.1	270	12	25.1	24.0	267
8.5	6	12.0	11.7	235	7	7.9	6.7	274	14	20.6	19.8	245	13	27.8	26.9	270	12	29.3	27.6	268	8	26.0	25.3	268
9.0	5	13.1	12.8	259	5	10.2	8.9	281	12	22.7	22.0	245	11	30.4	29.0	271	12	32.9	32.3	267	7	27.6	27.3	263
9.5	5	14.3	14.8	247	5	10.8	8.9	276	10	24.1	23.3	247	10	31.8	31.0	266	10	36.5	36.2	264	4	24.0	23.7	255
10.0	5	16.1	16.0	242	3	11.2	7.5	269	10	25.2	24.5	247	7	30.9	30.0	263	9	40.8	40.2	264	6	30.1	29.8	259
10.5	3	14.3	14.1	235	3	10.3	7.6	267	9	25.0	24.4	249	5	36.2	35.0	266	6	45.6	44.8	265	4	33.0	32.5	257
11.0	2	12.3	11.9	241	3	8.6	6.4	285	7	23.7	23.4	251	2	33.6	33.5	273	4	44.6	44.1	270	2	35.5	34.3	259
11.5	2	12.0	11.5	239	2	9.3	8.5	318	3	18.7	18.6	249	1	31.6	31.6	270	1	39.0	39.0	280	2	35.7	34.9	255
12.0	2	11.3	11.3	232	2	9.3	7.7	315	2	15.0	14.9	236	1	36.0	36.0	270	1	48.0	48.0	280	1	44.0	44.0	245
12.5	2	11.7	11.7	233	2	9.3	6.6	314	2	18.5	16.5	233	1	39.0	39.0	270	1	55.0	55.0	285	...	...	...	...
13.0	2	12.7	12.7	234	2	11.6	7.3	327	2	17.0	17.0	230	...	...	...	...	...	...	...	...	...	...	...	...
13.5	2	12.0	11.9	227	2	12.5	4.6	328	1	20.0	20.0	235	...	...	...	...	...	...	...	...	...	...	...	...
14.0	1	12.0	12.0	255	1	12.5	12.5	195	1	18.5	18.5	230	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
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...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	

n = Number of flights.

V = Velocity of wind, regardless of direction, metre per second.

v = Velocity of Resultant Wind, taking account of direction, metre per second.

L = Direction of Resultant Wind; North wind = 0° or 360°; East wind = 90°.

TABLE 21.—*Monthly means of wind direction and velocity of upper winds in 1918 at Lahore (height above sea level 0·21 Km.)*

Height above sea level Kms.	JANUARY.				FEBRUARY.				MARCH.				APRIL.				MAY.				JUNE.			
	n	V	v	L	n	V	v	L	n	V	v	L	n	V	v	L	n	V	v	L	n	V	v	L
0·22	...	...	...	...	...	...	...	...	7	2·0	0·8	293	28	1·7	0·6	5	26	1·9	0·8	170	16	2·1	1·3	171
0·5	...	...	...	...	...	...	...	...	7	7·3	1·0	333	28	7·4	3·4	343	28	6·0	1·8	227	14	6·3	2·1	180
1·0	...	...	...	...	...	...	...	...	7	5·9	0·5	315	28	7·5	3·7	331	28	5·9	3·6	262	14	3·9	1·6	237
1·5	...	...	...	...	...	...	...	...	7	4·9	0·4	65	28	7·3	3·9	328	28	4·8	3·6	295	14	2·6	1·7	290
2·0	...	...	...	...	...	...	...	...	7	4·4	1·1	240	28	7·5	4·5	316	28	4·6	3·6	305	14	3·0	2·2	301
2·5	...	...	...	...	...	...	...	...	7	4·9	1·5	272	28	7·0	5·5	309	28	5·0	4·0	312	14	4·2	3·2	291
3·0	...	...	...	...	...	...	...	...	7	4·6	2·5	246	28	8·0	6·8	300	28	5·6	4·5	318	13	4·5	3·7	307
3·5	...	...	...	...	...	...	...	...	7	4·5	3·1	230	27	9·4	7·0	294	28	6·8	5·5	320	13	5·0	4·6	315
4·0	...	...	...	...	...	...	...	...	7	6·3	3·0	253	27	9·7	8·0	282	28	7·5	5·6	325	13	5·5	4·7	319
4·5	...	...	...	...	...	...	...	...	7	10·4	6·6	261	27	10·6	9·1	279	28	7·8	5·9	329	13	5·8	5·0	323
5·0	...	...	...	...	...	...	...	...	6	11·3	9·7	277	27	12·1	10·5	278	28	7·7	5·6	318	13	5·6	4·7	325
5·5	...	...	...	...	...	...	...	...	5	11·2	9·7	285	26	13·8	11·9	273	28	8·1	5·7	312	12	4·9	3·2	301
6·0	...	...	...	...	...	...	...	...	5	12·6	10·6	279	25	16·2	14·0	273	28	9·7	6·7	304	12	6·1	3·5	267
6·5	...	...	...	...	...	...	...	...	5	13·4	11·6	284	21	16·7	15·1	281	28	11·2	8·1	301	12	7·4	4·8	243
7·0	...	...	...	...	...	...	...	...	5	14·7	13·2	290	20	18·6	17·2	282	27	12·8	8·3	298	12	9·3	7·9	235
7·5	...	...	...	...	...	...	...	...	5	17·5	15·4	288	18	19·1	17·6	283	26	14·2	8·5	296	12	11·5	9·8	239
8·0	...	...	...	...	...	...	...	...	4	22·5	20·7	291	14	17·1	15·8	288	24	15·3	9·6	287	11	11·2	9·3	237
8·5	...	...	...	...	...	...	...	...	4	25·9	25·3	282	11	16·0	14·4	288	21	15·9	10·0	282	11	12·1	10·4	236
9·0	...	...	...	...	...	...	...	...	3	25·3	24·7	282	11	17·8	16·6	293	21	16·4	10·6	284	10	12·1	9·7	227
9·5	...	...	...	...	...	...	...	...	2	32·7	31·7	279	10	17·3	15·9	291	18	15·7	11·9	284	7	10·3	8·3	229
10·0	...	...	...	...	...	...	...	...	2	38·3	37·7	281	9	19·5	17·8	286	15	15·6	12·0	283	4	10·4	7·9	210
10·5	...	...	...	...	...	...	...	...	1	43·0	43·0	270	5	18·0	15·9	280	18	16·6	12·8	291	4	10·9	8·0	210
11·0	...	...	...	...	...	...	...	...	1	46·0	46·0	260	4	14·1	12·9	275	9	16·8	11·7	297	4	11·7	9·4	201
11·5	...	...	...	...	...	...	...	...	...	...	...	...	8	7·0	6·7	281	6	16·7	16·0	282	3	8·0	7·0	171
12·0	...	...	...	...	...	...	...	...	...	...	...	...	2	8·5	7·5	267	3	16·2	15·3	287	3	9·2	7·7	179
12·5	...	...	...	...	...	...	...	...	...	...	...	...	1	6·0	6·0	290	...	...	...	...	3	9·7	7·7	180
13·0	...	...	...	...	...	...	...	...	...	...	...	...	1	9·5	9·5	295	...	...	...	...	3	10·7	8·2	184
13·5	...	...	...	...	...	...	...	...	...	...	...	...	1	13·5	13·5	285	...	...	...	...	3	11·5	8·3	181
14·0	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	11·7	8·8	179	
14·5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	13·0	13·0	190	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	

n=Number of flights.

V=Velocity of Wind, regardless of direction, metre per second.

v=Velocity of Resultant Wind, taking account of direction, metre per second.

L=Direction of Resultant Wind; North wind=0 or 360°; East wind=90°.

TABLE 21.—*Monthly means of wind direction and velocity of upper winds in 1918 at Lahore (height above sea level 0·21 Km.)—concl'd.*

Height above sea level Kms.	JULY.				AUGUST.				SEPTEMBER.				OCTOBER.				NOVEMBER.				DECEMBER.			
	n	V	v	L	n	V	v	L	n	V	v	L	n	V	v	L	n	V	v	L	n	V	v	L
0·22	23	1·2	0·1	205	23	1·7	0·8	183	16	1·0	0·8	211	23	0·5	0·1	23	29	0·3	0·1	274	27	0·5	0·5	204
0·5	23	5·0	1·0	240	23	5·2	2·2	206	15	5·5	4·3	254	23	4·0	0·9	288	28	4·9	1·4	323	28	4·3	3·3	325
1·0	23	5·0	3·0	269	21	4·7	2·5	244	16	4·7	3·7	266	23	4·5	2·2	277	28	4·6	3·0	307	28	4·6	2·9	306
1·5	23	3·8	2·8	295	21	3·7	2·3	265	16	3·8	3·0	292	23	3·8	2·1	298	29	4·3	3·3	311	28	4·2	2·7	291
2·0	23	3·8	3·1	284	22	3·3	1·9	287	16	4·2	3·2	305	23	4·0	2·8	303	28	5·1	4·0	314	28	4·4	2·2	290
2·5	23	4·3	3·6	287	22	3·3	2·3	307	16	4·8	4·0	301	23	4·6	3·6	307	28	5·5	4·1	307	28	5·3	2·8	280
3·0	23	4·7	3·7	303	21	4·2	2·9	327	16	5·0	4·6	310	23	4·7	3·8	307	29	5·4	4·0	302	28	5·9	3·6	270
3·5	23	5·2	4·4	323	20	5·1	3·9	329	16	5·2	5·1	315	23	5·6	4·2	313	29	6·8	5·3	291	28	7·2	5·3	278
4·0	23	6·5	5·3	330	20	5·9	4·5	325	16	5·6	5·1	309	23	6·3	4·8	307	29	7·9	6·4	281	28	8·4	6·5	277
4·5	22	7·8	6·4	333	20	6·9	4·9	325	16	6·2	4·3	299	23	6·9	5·8	296	29	9·1	7·7	280	28	10·4	8·6	270
5·0	22	7·8	5·9	331	20	5·4	3·8	329	16	6·3	4·1	292	23	8·5	7·3	287	29	11·1	9·7	281	28	12·7	10·5	274
5·5	20	7·8	4·9	299	20	5·5	2·9	281	16	6·5	5·2	266	23	9·9	9·0	285	29	12·9	11·5	280	28	14·8	12·5	277
6·0	19	7·7	5·3	274	20	7·4	4·1	256	16	9·3	8·6	254	22	11·3	10·6	281	29	14·9	13·5	277	28	16·6	14·3	277
6·5	19	8·2	6·2	269	20	9·6	5·8	261	15	12·3	11·8	255	22	13·5	12·6	279	29	16·6	15·0	275	28	18·7	16·6	275
7·0	19	9·4	7·2	267	19	9·6	6·6	259	15	14·1	13·7	258	22	15·5	14·3	275	29	19·1	17·1	275	27	21·3	19·2	277
7·5	19	10·7	8·1	261	19	9·8	7·3	256	14	15·9	15·3	266	22	18·6	17·4	275	28	20·5	18·9	275	26	23·8	21·8	277
8·0	19	12·2	9·9	261	18	9·7	7·1	255	13	16·9	16·7	256	21	21·8	20·8	274	27	22·6	21·4	274	26	26·9	25·0	275
8·5	19	13·2	11·1	262	18	9·1	6·7	258	12	19·5	19·1	256	21	25·1	24·2	273	26	25·3	24·0	273	21	27·5	25·8	275
9·0	16	14·9	12·6	260	17	8·3	5·6	261	10	19·6	19·3	260	19	27·7	26·7	272	23	26·6	25·7	272	19	30·0	28·1	275
9·5	15	15·0	12·9	263	16	8·0	5·0	257	10	21·5	21·1	258	16	28·9	27·8	271	19	28·6	27·5	272	14	33·8	32·1	278
10·0	11	13·8	12·2	266	15	8·6	5·7	248	10	21·9	21·8	261	11	28·9	28·5	269	13	30·5	29·8	278	11	34·4	32·1	273
10·5	9	15·0	13·3	262	14	8·7	6·4	251	8	19·1	18·9	261	7	30·1	29·7	266	10	31·9	31·1	279	8	37·9	36·6	275
11·0	8	14·8	12·9	278	12	9·4	6·7	249	7	18·3	18·1	261	4	32·5	32·1	266	7	34·9	34·0	278	6	39·2	38·0	280
11·5	6	14·7	12·6	268	11	8·9	6·0	254	4	16·7	16·4	254	3	32·8	31·7	265	6	35·9	34·7	275	2	35·3	33·5	288
12·0	3	14·8	14·7	269	9	7·0	4·5	275	3	15·2	14·5	249	2	34·5	33·7	265	2	41·0	40·5	283	1	29·0	28·0	280
12·5	2	13·5	12·3	264	6	7·5	5·5	282	1	22·5	22·6	285	1	34·5	34·8	260	...	...	...	...	...	...	...	...
13·0	2	14·7	11·7	246	6	7·9	6·3	288	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
13·5	...	...	...	...	4	8·4	7·7	280	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
14·0	...	...	...	...	3	7·3	7·2	284	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
14·5	...	...	...	...	1	8·0	3·0	305	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
15·0	...	...	...	...	1	2·5	2·5	285	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

n = Number of flights.

V = Velocity of wind, regardless of direction, metre per second.

v = Velocity of Resultant Wind; taking account of direction, metre per second.

L = Direction of Resultant Wind; North wind = 0° or 360°; East wind = 90°.

TABLE 22.—*Monthly means of wind direction and velocity of upper winds in 1918 at Kojak (Chaman) (height above sea level 1.95 Kms.)*

Height above sea level Kms.	JANUARY.				FEBRUARY.				MARCH.				APRIL.				MAY.				JUNE.			
	n	V	v	L	n	V	v	L	n	V	v	L	n	V	v	L	n	V	v	L	n	V	v	L
2.5	24	4.6	2.7	275	10	4.9	4.0	288	12	4.9	4.1	273	24	5.7	3.9	270	27	6.7	5.5	293	23	6.0	5.1	281
3.0	24	6.7	4.7	277	10	7.1	6.5	293	12	7.8	6.7	267	24	8.6	7.3	271	27	7.8	7.2	286	23	7.7	6.8	286
3.5	24	8.0	5.9	271	9	9.4	8.8	291	12	10.1	8.9	265	23	9.8	8.5	260	27	8.0	7.4	266	23	8.0	6.9	285
4.0	24	9.6	7.7	273	10	10.4	9.8	262	12	12.5	11.2	255	13	10.7	9.1	268	27	8.1	7.2	290	23	7.8	5.9	284
4.5	23	11.6	9.3	274	10	12.4	11.7	276	12	13.0	12.5	250	21	10.0	8.5	273	27	8.0	6.4	296	23	8.1	5.0	285
5.0	23	13.6	11.3	271	10	14.1	13.5	271	11	15.1	13.7	253	19	10.9	9.2	277	27	8.0	6.9	301	23	7.7	3.1	290
5.5	23	15.6	13.6	270	10	15.9	15.5	269	9	16.0	15.3	249	17	11.8	9.8	267	27	8.8	6.8	298	23	7.0	2.9	306
6.0	23	17.7	14.5	271	10	18.3	17.7	267	7	17.9	15.2	244	15	11.8	10.2	264	26	8.6	6.5	295	22	6.7	4.2	295
6.5	21	19.4	17.3	270	8	21.3	20.6	265	5	17.3	18.7	242	15	14.1	12.6	262	24	9.9	7.3	292	21	8.4	6.6	283
7.0	20	22.0	20.3	269	7	24.3	23.6	259	5	18.0	14.0	253	14	15.0	13.2	263	23	11.2	9.0	277	21	9.7	7.8	274
7.5	16	24.0	22.1	271	7	28.1	27.0	257	3	20.0	15.2	265	14	17.4	15.2	272	22	12.2	8.4	272	21	10.3	8.4	267
8.0	12	22.5	21.0	278	4	35.1	35.0	253	2	19.7	19.5	284	13	19.0	16.4	272	21	11.8	8.3	262	20	10.6	9.1	257
8.5	8	22.6	21.0	277	1	37.5	37.5	255	1	23.5	23.5	280	12	22.7	19.5	266	21	13.2	9.3	263	20	12.5	11.0	268
9.0	6	22.5	21.6	269	1	39.0	39.0	255	1	30.5	30.5	280	7	24.4	21.1	270	20	13.6	9.6	259	17	12.8	11.5	253
9.5	3	25.7	24.3	281	...	...	...	...	...	...	...	...	5	21.6	20.9	265	19	13.8	11.1	253	18	12.7	11.4	256
10.0	2	27.0	26.0	281	...	...	...	...	...	...	...	...	4	18.9	18.7	260	17	13.3	11.0	253	15	12.8	11.9	250
10.5	1	23.0	23.0	300	...	...	...	...	...	...	...	...	4	20.5	19.8	263	17	14.9	13.3	258	15	13.8	12.5	249
11.0	...	...	...	...	...	...	...	...	...	...	...	...	2	26.7	25.3	251	15	16.5	14.9	258	14	14.4	13.1	247
11.5	...	...	...	...	...	...	...	...	...	...	...	...	1	13.5	13.5	235	13	15.2	12.8	251	12	13.5	11.9	255
12.0	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	12	15.7	13.6	255	12	13.9	12.0	255
12.5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	11	17.1	16.4	249	8	11.9	10.2	261
13.0	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	11	18.2	17.5	251	8	12.9	11.1	264
13.5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	10	18.5	17.6	251	5	11.5	9.6	274
14.0	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6	26.6	23.4	249	4	9.5	7.8	268
14.5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4	20.4	19.7	244	4	9.8	8.0	257
15.0	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	19.8	19.7	255	3	11.7	10.9	264
15.5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	17.3	17.3	258	...	...	...	...
16.0	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	18.3	18.3	255	...	...	...	...
16.5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	18.1	18.0	253	...	...	...	...
17.0	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	19.7	19.7	248	...	...	...	...
17.5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	20.7	20.7	250	...	...	...	...
18.0	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	25.0	25.0	245	...	...	...	...
18.5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	27.0	27.0	245	...	...	...	...
19.0	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	24.5	24.5	250	...	...	...	...

n = Number of flights.

V = Velocity of wind, regardless of direction, metre per second.

v = Velocity of Resultant Wind; taking account of direction, metre per second.

L = Direction of Resultant Wind; North wind=0° or 360°; East wind=90°.

TABLE 22.—*Monthly means of wind direction and velocity of upper winds in 1918 at Kojak (Chaman) (height above sea level 1,950 Kms.)—concl'd.*

Height above sea level Kms.	JULY.				AUGUST.				SEPTEMBER.				OCTOBER.				NOVEMBER.				DECEMBER.			
	n	V	v	L	n	V	v	L	n	V	v	L	n	V	v	L	n	V	v	L	n	V	v	L
2.5	14	5.1	3.8	286	28	4.1	2.6	254	20	3.7	2.5	248	10	4.1	2.9	264	17	5.0	4.1	286	...	...	...	...
3.0	14	5.0	5.3	269	27	5.5	4.7	264	20	5.1	3.9	257	13	5.8	4.5	289	17	7.6	6.7	295	...	...	...	...
3.5	14	5.8	5.5	269	27	5.8	4.2	267	20	5.8	4.3	253	12	6.0	4.9	290	17	9.3	8.3	289	...	...	...	...
4.0	14	5.0	4.3	285	27	5.3	2.4	242	20	6.2	3.6	254	12	7.9	6.9	301	17	10.8	9.7	290	...	...	...	...
4.5	14	4.8	2.9	262	27	5.7	2.4	176	20	6.9	3.4	256	12	9.1	7.9	290	16	10.1	9.3	205	...	...	...	...
5.0	14	5.0	1.2	272	27	6.1	3.5	151	20	7.0	3.8	263	12	9.7	8.8	294	16	9.6	8.9	287	...	...	...	...
5.5	14	5.1	1.2	314	27	6.4	3.7	152	20	8.2	5.2	261	12	10.5	9.7	298	16	11.2	10.3	280	...	...	...	...
6.0	14	6.0	3.7	304	26	5.6	1.9	154	20	8.6	6.7	273	12	11.8	11.3	290	14	12.8	11.9	275	...	...	...	...
6.5	13	7.3	5.4	314	25	6.3	1.1	213	19	9.3	7.3	277	12	13.8	13.3	287	14	13.9	12.8	269	...	...	...	...
7.0	13	7.8	6.1	311	24	8.0	1.6	238	19	10.4	8.3	271	12	15.2	14.9	284	14	14.3	13.5	267	...	...	...	...
7.5	13	8.3	7.0	302	23	9.4	2.3	245	19	12.6	10.8	267	12	17.6	17.3	282	14	15.3	14.5	268	...	...	...	...
8.0	13	8.2	6.7	296	23	9.9	2.5	260	17	13.9	12.3	267	12	20.6	20.3	279	14	17.6	16.7	267	...	...	...	...
8.5	12	8.7	7.2	281	23	10.4	2.4	253	13	15.6	14.1	267	12	23.4	23.0	278	11	17.0	16.3	272	...	...	...	...
9.0	12	9.3	7.9	272	22	10.0	1.9	271	12	18.4	16.7	262	11	23.3	22.8	275	11	19.9	19.3	266	...	...	...	...
9.5	12	10.2	8.7	265	21	9.5	1.3	320	11	20.5	18.5	263	9	26.2	25.9	277	10	22.5	21.6	262	...	...	...	...
10.0	12	11.6	10.2	263	20	9.0	1.7	284	6	18.1	15.2	271	6	28.0	27.5	277	9	26.0	25.0	263	...	...	...	...
10.5	11	10.3	9.5	266	18	8.6	1.4	323	4	19.0	18.5	263	5	33.2	32.3	277	8	30.1	28.9	266	...	...	...	...
11.0	11	10.8	10.1	266	17	9.3	1.8	339	4	21.4	20.7	263	3	26.0	25.4	276	5	29.0	28.4	266	...	...	...	...
11.5	9	11.5	10.7	261	14	8.0	0.6	335	4	20.0	19.5	259	1	16.5	16.5	255	4	29.1	28.4	264	...	...	...	...
12.0	5	10.5	9.2	260	14	7.6	0.6	298	3	21.0	20.8	270	1	18.5	18.5	255	3	35.5	35.5	252	...	...	...	...
12.5	2	5.5	8.1	270	11	7.0	1.7	321	2	13.3	12.1	269	1	18.0	18.0	240	3	39.3	39.3	240	...	...	...	...
13.0	1	8.5	8.5	255	9	5.8	0.8	80	1	3.0	3.0	165	1	19.5	19.5	255	3	44.3	44.4	250	...	...	...	...
13.5	1	8.5	8.5	260	9	5.0	1.2	112	1	3.5	3.5	160	...	...	...	...	3	52.2	52.2	262	...	...	...	...
14.0	...	...	...	...	8	3.9	0.6	225	1	3.5	3.5	165	...	...	...	...	...	...	...	...	...	...	...	
14.5	...	...	...	...	6	4.0	1.3	264	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
15.0	...	...	...	...	5	3.9	0.8	186	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
15.5	...	...	...	...	4	4.6	1.1	105	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
16.0	...	...	...	...	2	5.0	4.5	33	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
16.5	...	...	...	...	1	9.5	9.5	40	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	

n=Number of flights;

V=Velocity of wind, regardless of direction, metre per second.

v=Velocity of Resultant Wind, taking account of direction, metre per second.

L=Direction of Resultant wind; North wind = 0° or 360°; East wind = 90°.

TABLE 25.—*Monthly means of wind direction and velocity of upper winds in 1918 at Bangalore (height above sea level 0·9 Km.)*

$n$  = Number of flights

**V** = Velocity of wind, regardless of direction, metres per second.

$v$  = Velocity of Resultant Wind; taking account of direction, metre per second.

L = Direction of Resultant Wind; North wind =  $0^\circ$  or  $360^\circ$ ; East wind =  $90^\circ$ .

TABLE 23.—*Monthly means of wind direction and velocity of upper winds in 1918 at Bangalore (height above sea level 0·9 Km.)—concl'd.*

Height above sea level Kms.	JULY.				AUGUST.				SEPTEMBER.				OCTOBER.				NOVEMBER.				DECEMBER.			
	n	V	v	L	n	V	v	L	n	V	v	L	n	V	v	L	n	V	v	L	n	V	v	L
1·5	11	9·3	9·0	283	6	10·0	9·8	271	11	5·8	4·7	287	24	4·6	3·5	46	11	5·0	4·5	63	22	6·5	5·8	74
2·0	11	6·4	6·2	284	6	11·3	11·1	280	11	3·9	2·5	300	23	5·7	5·0	45	11	5·5	3·9	54	22	5·6	4·7	77
2·5	10	4·1	3·0	272	6	9·8	9·7	289	11	3·1	0·6	298	23	6·0	5·3	41	10	5·3	3·7	56	22	4·4	3·5	82
3·0	8	3·4	1·7	237	6	7·7	7·7	293	11	3·7	1·6	280	23	5·9	5·2	51	10	4·4	2·6	67	21	4·4	3·7	86
3·5	6	4·1	2·6	247	6	8·3	8·3	287	11	4·7	2·4	279	24	5·7	4·8	64	11	4·8	3·0	61	21	4·9	3·8	80
4·0	6	3·3	2·8	287	6	8·7	8·5	287	10	5·1	2·7	284	24	5·9	4·5	68	11	4·7	1·9	49	21	5·3	3·9	78
4·5	6	3·3	2·2	271	4	9·7	9·5	293	9	5·1	2·1	301	24	5·9	4·7	72	8	4·6	2·9	37	20	5·9	3·9	80
5·0	6	4·1	1·6	260	3	11·0	10·6	291	9	4·2	1·6	299	23	6·3	5·1	76	7	5·7	4·2	34	20	6·3	3·3	73
5·5	6	4·8	1·6	228	1	9·0	9·0	230	8	3·3	0·8	259	23	6·9	5·8	86	7	7·3	4·7	28	19	6·4	3·7	88
6·0	5	3·7	2·4	103	1	7·0	7·0	305	8	3·3	0·5	72	20	7·4	7·0	88	7	7·3	4·4	29	18	7·7	4·5	97
6·5	4	4·7	4·3	126	1	3·5	3·5	350	6	3·9	1·0	95	20	7·7	7·2	87	5	7·3	4·4	62	18	8·2	3·7	97
7·0	2	4·7	4·4	190	...	...	...	...	5	4·4	3·3	90	20	6·9	6·6	88	5	8·3	4·3	58	17	8·0	3·1	97
7·5	2	7·3	6·5	114	...	...	...	...	4	5·3	4·5	95	17	6·6	6·1	80	5	8·6	5·1	61	16	7·9	1·9	59
8·0	2	9·7	9·5	112	...	...	...	...	3	6·7	6·7	114	15	6·5	5·9	87	5	8·5	5·0	50	16	8·1	1·1	9
8·5	2	10·5	10·1	114	...	...	...	...	3	7·5	7·4	108	14	5·5	4·7	84	5	8·5	5·8	52	12	8·7	2·8	236
9·0	2	10·7	10·7	100	...	...	...	...	3	10·5	10·5	90	13	5·5	4·2	92	5	8·5	5·9	60	11	10·8	5·1	228
9·5	2	12·0	12·0	103	...	...	...	...	2	11·0	10·9	95	9	3·8	2·7	68	5	8·8	6·6	74	9	11·3	5·1	246
10·0	2	12·7	12·7	108	...	...	...	...	1	16·0	16·0	100	6	3·1	1·6	40	3	10·2	8·5	64	8	11·1	5·6	266
10·5	1	12·5	12·5	110	...	...	...	...	1	17·0	17·0	100	4	3·5	1·4	160	2	10·7	6·9	87	7	11·3	4·8	256
11·0	1	13·0	13·0	115	...	...	...	...	...	...	...	...	4	4·7	3·9	169	2	10·5	7·1	98	6	11·4	4·9	261
11·5	...	...	...	...	...	...	...	...	...	...	...	...	4	4·7	3·4	173	2	11·7	8·9	100	5	11·1	6·4	205
12·0	...	...	...	...	...	...	...	...	...	...	...	...	3	7·5	6·4	166	2	18·5	8·4	97	3	10·2	6·7	280
12·5	...	...	...	...	...	...	...	...	...	...	...	...	3	8·0	7·5	168	1	22·0	22·0	70	3	10·8	7·4	280
13·0	...	...	...	...	...	...	...	...	...	...	...	...	2	8·5	8·3	171	1	24·0	24·0	65	3	9·7	7·1	281
13·5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	25·5	25·5	70	3	9·2	7·6	277
14·0	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	25·0	25·0	70	2	13·3	13·3	293
14·5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	23·5	23·5	70	2	14·7	14·7	293
15·0	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	22·0	22·0	70	1	13·5	13·5	285
15·5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	23·0	23·0	70	...	...	...	...
16·0	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	25·5	25·5	65	...	...	...	...
16·5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	26·0	26·0	65	...	...	...	...
17·0	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	25·5	25·5	80	...	...	...	...

n=Number of flights,  
V=Velocity of wind, regardless of direction, metre per second.  
v=Velocity of Resultant wind; taking account of direction, metre per second.  
L=Direction of Resultant Wind; North wind=0° or 360°; East wind=90°.

## Humidity.

The departures from normal of the mean monthly and annual aqueous vapour pressure and relative humidity for stations in Table A, for the year 1918, are given in Tables 24 and 25. The normal values employed in the determination of the departures are given in Tables XXX and XXXIII of the Indian Meteorological Memoirs, Volume XVII. The Tables 26 and 27 give departure data of 8 hours

aqueous vapour pressure and relative humidity for each month of the year and for the year for the fifteen chief political divisions.

Normal values for most of the stations in Table B, have been derived from the 8 hours records of the period 1889-1910 and are given in Part III, Volume XXII of Meteorological Memoirs.

TABLE 24.—*Departure from normal of the monthly and annual mean aqueous vapour pressure at first and second class stations in 1918.*

DIVISION.	STATION.	JANUARY.	FEBRUARY.	MARCH.	APRIL.	MAY.	JUNE.	JULY.	AUGUST.	SEPTEMBER.	OCTOBER.	NOVEMBER.	DECEMBER.	YEAR.
Bengal . . . .	Calcutta . . . .	" -066	-062	-009	-075	+002	-029	+011	-010	+001	-032	-004	-049	-027
Punjab . . . .	Lahore . . . .	-025	-006	+063	+036	+102	+090	-112	-077	-094	-043	-019	-011	-008
Rajputana . . . .	Jaipur . . . .	-059	-041	-030	-060	+021	-036	-132	-042	-079	-094	-075	-078	-059
Bombay . . . .	Bombay . . . .	-040	-047	-048	-059	-001	-056	-045	-026	-056	-030	-011	-077	-044
Mysore . . . .	Bangalore . . . .	+047	-062	-072	-044	+017	-042	-054	-020	-018	-075	+069	+025	-019
Madras . . . .	Madras . . . .	+050	-032	+001	+007	-015	-037	-049	-050	+030	-155	+081	+081	-003
Hill Stations, excluding Kashmir and Baluchistan.	Katmandu . . . .	-033	-024	-018	-024	+075	+005	-018	-018	-011	-053	-042	-054	-018
Extra India . . . .	Seychelles . . . .	-069	-041	-048	-044	-056	-051	-054	-060	-001	-021	-020	-006	-040
	Mauritius . . . .	-045	-027	-016	0	-031	0	-004	-075	-039	+008	-016	-155	-025

TABLE 25.—*Departure from normal of the monthly and annual mean relative humidity at first and second class stations in 1918.*

DIVISION.	STATION.	JANUARY.	FEBRUARY.	MARCH.	APRIL.	MAY.	JUNE.	JULY.	AUGUST.	SEPTEMBER.	OCTOBER.	NOVEMBER.	DECEMBER.	YEAR.
Bengal . . . .	Calcutta . . . .	-8	-9	-5	-3	+5	+6	-4	-1	-2	-8	-5	-7	-3
Punjab . . . .	Labore . . . .	-5	-4	+12	+11	+1	+3	-16	-12	-6	-3	-2	0	-2
Rajputana . . . .	Jaipur . . . .	-9	-10	-3	-2	-3	-7	-21	-10	-11	-13	-11	-11	-9
Bombay . . . .	Bombay . . . .	-5	-4	-7	-5	+3	-3	-8	-6	-8	-6	-5	-8	-5
Mysore . . . .	Bangalore . . . .	+8	-2	-3	-2	+7	-3	-10	-4	-4	-14	+3	-1	-2
Madras . . . .	Madras . . . .	+5	-1	+3	+1	+1	-2	-9	-9	-1	-11	+6	-1	-1
Hill Stations, excluding Kashmir and Baluchistan.	Katmandu . . . .	-7	-9	-7	-3	+6	+1	-4	-1	-4	-10	-6	-6	-4
Extra India . . . .	Seychelles . . . .	-4	-5	-5	-5	-6	-6	-6	-6	-2	-5	-5	-2	-5
	Mauritius . . . .	-3	+2	+1	0	0	+3	+3	-3	-2	+1	0	-5	0

TABLE 26.—*Departure from normal of the mean monthly and annual aqueous vapour pressure in the fifteen chief political divisions of India in 1918.*

DIVISION.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Year.
Burma . . . . .	"	"	"	"	"	"	"	"	"	"	"	"	"
Burma . . . . .	-·033	-·039	-·015	-·057	-·020	-·036	+·005	-·019	-·012	-·025	+·022	+·036	-·016
Assam . . . . .	-·028	-·029	+·035	-·012	+·029	-·027	-·023	-·016	-·009	-·015	-·023	-·012	-·010
Bengal . . . . .	-·050	-·083	+·012	-·064	-·007	-·035	+·005	-·017	-·003	-·028	-·028	-·050	-·025
Bihar and Orissa . . . . .	-·049	-·064	-·011	-·015	+·026	-·012	-·029	-·007	-·029	-·110	-·033	-·051	-·032
United Provinces . . . . .	-·045	-·039	+·009	-·038	+·097	+·039	-·100	-·046	-·118	-·122	-·060	-·059	-·040
Punjab . . . . .	-·021	-·018	+·037	-·003	+·082	+·056	-·103	-·074	-·127	-·067	-·038	-·004	-·028
North-West Frontier Province . . . . .	-·029	-·007	+·013	-·021	+·002	+·096	-·121	-·069	-·083	-·024	-·014	+·017	-·020
Sind . . . . .	-·024	+·051	+·071	-·048	+·018	+·015	-·039	-·067	-·068	-·053	-·101	-·021	-·014
Rajputana . . . . .	-·022	-·008	+·017	-·032	+·064	-·058	-·130	-·066	-·107	-·113	-·062	-·051	-·047
Bombay . . . . .	-·032	-·003	-·019	-·095	+·018	-·046	-·054	-·023	-·051	-·075	-·024	+·002	-·038
Central India . . . . .	-·048	-·014	-·001	-·125	+·062	-·023	-·081	-·059	-·101	-·129	-·053	-·026	-·050
Central Provinces . . . . .	-·040	-·013	-·027	-·100	+·076	-·017	-·072	-·029	-·081	-·138	-·059	-·013	-·042
Hyderabad . . . . .	-·003	-·021	-·026	-·074	+·089	-·044	-·054	-·031	-·032	-·117	+·004	+·039	-·023
Mysore . . . . .	+·005	-·073	-·033	-·051	-·012	-·048	-·043	-·015	-·017	-·032	+·071	+·023	-·019
Madras . . . . .	+·003	-·071	-·027	-·029	-·021	-·032	-·021	-·018	-·009	-·020	+·069	+·082	-·012
Mean of India . . . . .	-·029	-·027	-·002	-·052	+·040	-·016	-·056	-·035	-·059	-·077	-·022	-·010	-·029

TABLE 27.—*Departure from the normal of the mean monthly and annual relative humidity in the fifteen chief political divisions of India in 1918.*

DIVISION.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Year.
Burma . . . . .	-5	-2	-1	-2	+3	0	0	0	0	-1	0	0	-1
Assam . . . . .	-2	-1	+4	-2	-3	0	+1	0	0	-3	-1	-2	-1
Bengal . . . . .	-5	-2	0	-1	+2	+3	-1	+1	-1	-3	-4	-6	-1
Bihar and Orissa . . . .	-4	-9	-3	+1	+5	+8	-7	+1	-3	-10	-8	-9	-3
United Provinces . . . .	-6	-10	-1	-1	+6	+7	-17	-7	-19	-15	-11	-11	-7
Punjab . . . . .	0	-8	+9	+9	+1	+6	-14	-9	-12	-6	-7	0	-3
North-West Frontier Province .	-4	-7	+9	+4	-7	+8	-13	-9	-5	-3	+1	+7	-2
Sind . . . . .	+2	+3	+11	-1	+8	+5	-2	-4	-4	-4	-12	-1	0
Rajputana . . . . .	0	-5	+2	+1	+4	-1	-12	-7	-8	-10	-9	-8	-4
Bombay . . . . .	-3	+1	-2	-4	+5	-3	-8	-4	-5	-9	-6	-1	-3
Central India . . . . .	-1	-4	0	-9	+5	+1	-12	-7	-11	-15	-11	-5	-6
Central Provinces . . . . .	-3	-5	-4	-8	+7	+7	-11	-3	-12	-18	-12	-4	-5
Hyderabad . . . . .	+3	-1	-1	-3	+14	+1	-9	-4	-6	-17	-4	+2	-2
Mysore . . . . .	+5	-5	+1	-1	+4	-1	-8	-2	-2	-9	+7	+1	-1
Madras . . . . .	+2	-2	+1	-1	+2	-1	-5	-2	-3	-6	+5	+3	-1
Mean of India . . . . .	-2	-4	+1	-1	+4	+2	-8	-4	-6	-9	-5	-3	-3

### Cloud.

Normal values of the mean monthly and annual amount of cloud at stations in Table A have been obtained from the whole of the available data up to the end of the year 1899 and given in Tables XXXV and XXXVI of the Indian Meteorological Memoirs, Volume XVII. These means are the arithmetical averages of the cloud amounts as registered at 10 and 16 hours, and hence represent the mean amount during the day period rather than of the whole 24 hours.

The normals used in Table B are in the case of the majority of stations based on the 8 hours records of the period 1889—1910, and are given in the Volume XXII, Part III, of the Memoirs.

Departure data of this element of meteorological observation for first and second class stations for the year 1918 are given in Table 28. Table 29 gives the departures of the 8 hours cloud for the fifteen chief political provinces of India.

TABLE 28.—*Departure from normal of the monthly and annual mean cloud amount at first and second class stations in 1918.*

DIVISION.	STATION.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Year.
Bengal . . . . .	Calcutta . . . . .	+0·6	-1·7	-0·4	+0·1	+2·0	+1·7	-0·3	+0·4	0	-1·7	+1·4	0	+·2
Punjab . . . . .	Lahore . . . . .	-2·6	-0·6	+1·6	-0·8	-1·0	-2·2	-2·4	-1·1	-1·1	-0·3	-0·4	+0·1	-1·0
Rajputana . . . . .	Jaipur . . . . .	-2·1	-1·2	+0·1	+0·1	-0·2	+1·1	-3·4	-1·7	-1·1	-0·8	-0·2	+0·2	-0·9
Bombay . . . . .	Bombay . . . . .	+0·4	-0·3	+0·2	-0·3	+2·5	-0·2	-1·6	+0·5	-1·2	-2·2	+1·5	+0·2	0
Madras . . . . .	Madras . . . . .	+1·1	-1·1	-0·7	-2·0	+0·8	-1·1	-2·2	+0·5	+0·4	-2·5	+2·2	+0·6	-0·3
Hill stations, excluding Kashmir and Baluchistan.	Katmandu . . . . .	-1·3	-0·5	+0·4	+0·2	+1·5	+0·1	+0·1	0	-1·1	-0·9	+0·6	+0·1	-0·1
Extra India . . . . .	Seychelles . . . . .	+0·6	-0·8	-1·6	0	+0·2	-2·0	-0·1	+0·7	+1·7	-0·1	-1·4	-0·5	-0·3
	Mauritius . . . . .	+0·7	+0·4	0	+1·9	+0·7	+0·8	+0·9	+0·5	+0·5	+1·1	+0·6	-1·0	+0·6

TABLE 29.—*Departure from normal of the mean monthly and annual cloud amount in the fifteen chief political divisions of India in 1918.*

DIVISION.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Year.
Burma . . . . .	+1.9	+0.5	+0.8	+0.6	+1.5	+0.2	+0.4	+0.3	+0.5	+0.6	+1.0	+1.2	+0.8
Assam . . . . .	-1.1	0	0	-1.3	-1.0	-0.1	+0.3	-0.7	-0.8	-1.6	+0.2	+0.8	-0.4
Bengal . . . . .	0	-0.8	+0.1	0	+0.8	+1.2	+0.1	+0.6	0	-1.1	+1.0	+0.6	+0.2
Bihar and Orissa . . . . .	+0.1	-1.3	+0.1	+0.5	+1.7	+2.2	-0.7	+1.3	-0.1	-1.4	+1.9	+1.0	+0.4
United Provinces . . . . .	-1.7	-1.5	-0.4	-0.2	+0.2	+0.7	-2.5	-0.3	-1.5	-1.1	0	+0.1	-0.7
Punjab . . . . .	-2.2	-0.3	+0.8	+0.2	-0.8	-0.2	-2.5	-0.7	-0.5	+0.1	-0.2	+0.2	-0.5
North-West Frontier Province .	-2.6	+0.3	+2.1	-0.5	-1.5	-0.9	-1.7	+0.2	-0.2	-0.3	+1.7	-0.5	-0.6
Sind . . . . .	-2.2	-0.7	+0.1	0	+0.2	+0.2	-2.1	-0.6	-0.5	-0.4	+1.0	-0.7	-0.6
Rajputana . . . . .	-1.5	-0.8	0	+0.1	+0.4	+0.5	-2.0	-1.0	-1.2	-0.6	+0.1	+0.1	-0.5
Bombay . . . . .	+0.6	-0.3	+0.4	-0.4	+1.9	-0.3	-1.3	+0.3	-1.1	-1.5	+1.4	+0.6	0
Central India . . . . .	-1.1	-0.8	-0.4	-0.9	+0.7	+0.9	-1.1	+0.3	-1.8	-1.6	+0.3	+0.8	-0.4
Central Provinces . . . . .	+0.2	-0.3	0	-1.2	+1.5	+0.8	-1.7	-0.1	-1.3	-1.5	+1.5	+0.9	-0.1
Hyderabad . . . . .	+1.7	-0.3	+0.6	-0.9	+1.6	+0.1	-1.8	+0.5	0	-2.3	+2.7	+1.8	+0.3
Mysore . . . . .	+1.9	-0.7	0	-0.7	+1.6	-1.5	-2.6	-1.5	-1.8	-3.7	+2.7	+0.5	-0.5
Madras . . . . .	+1.5	-0.7	-0.4	-1.0	+1.2	-0.4	-2.1	0	-0.1	-2.5	+2.5	+1.0	-0.1
Mean of India . . . . .	-0.1	-0.5	+0.2	-0.3	+0.9	+0.4	-1.4	0	-0.6	-1.1	+1.0	+0.7	-0.1

### Snowfall,

(A).—*The cold weather of 1917-18 and the succeeding hot weather:—*

- (a) In Persia the winter began unusually late, in the second week of December, and lasted up to the end of April. The total precipitation of the period November to May was appreciably above normal owing mainly to heavy falls in March and April.
- (b) In Baluchistan the precipitation was nearly normal in amount in November and April, in large excess in March and in decided defect in December, January, February and May.
- (c) On the ranges to the north of Kabul heavy falls occurred locally in December, March and the early part of April, and light to moderate falls in January and February. Heavy snow was also reported to have fallen around Herat in the first half of January and around Ghazni during the first week. About the middle of May the Pagham, Shakardara, Koh Sufed, Hindu Kush and Hazarajat ranges were still covered with snow.
- (d) In the North-West Frontier Province the snowfall was lighter than usual in the Hazara hills throughout the winter except for heavy falls in December, March and early April; the last fall occurred down to a level of 3,000 feet. In

north Waziristan the fall was apparently scanty while in south Waziristan, although but little snow fell up to the end of February, the quantity received in March and the early part of April was well above normal. Much snow was said to have fallen on the Lowarai pass in the first week of April.

- (e) The snowfall in the Kashmir hills was in marked excess in October and March, in moderate excess in December and April and much lighter than usual in November, January and February. In May no snowfall occurred and the previous accumulations were diminishing rapidly in depth. The Karakoram pass was reported to have opened exceptionally early.
- (f) In the Punjab Himalayas abnormally heavy snow fell during the last week of October, but during the succeeding four months weather was much less disturbed than usual and snowfall on the whole was scanty. Frequent falls occurred in March and the early part of April, some of them down to unusually low levels: in Chamba the snowline was reported to have come down as low as 3,000 feet on the 23rd March. A rapid melting of the accumulations occurred in the latter part of April and during May with the result that the quantity lying at the end of May was below the average.

(g) In the Almora hills the snowfall was nearly normal from October to January, in decided defect in February, in marked excess in March and slightly heavier than usual in the succeeding two months. The accumulations on May 21st were on the whole appreciably below normal.

(h) Snowfall was in slight excess in the western section of the North-East Frontier Tract, and lighter than usual in the eastern and central sections as well as on the Himalayan ranges bordering on north Lakhimpur and the district of Kamrup.

On the whole it may be said that over nearly the whole area from Persia to Kumaon the snowfall was lighter than usual from November to February, and in decided excess in March and the early part of April. Little or no snow would appear to have fallen subsequently except in the Kumaon hills, and the accumulations at the end of May were on the whole of about the average depth in the Afghan mountains, and in defect in the western Himalayas.

(B).—*The southwest monsoon period, June to September:*

During June snowfall was about normal in Afghanistan, the North-West Frontier Province and Kashmir and below

it over the rest of the Himalayas.

In July the fall in the North-West Frontier Province and the western Himalayas was normal or somewhat above it.

During August the month's fall was on the whole below normal in the North-West Frontier Province and Kashmir and normal or slightly above it in Almora.

In September the month's fall was above normal in Kashmir and probably not appreciably different from the normal in the North-West Frontier Province and on the Almora hills.

(C) *The period October to December:*

In October the month's fall was about normal in Afghanistan but somewhat below it on the western Himalayas.

In November the western Himalayas as well as the mountains in Afghanistan had, on the whole, more snow than usual.

During December the month's fall was above normal in Afghanistan, Persia, the North-West Frontier Province and the greater part of the western Himalayas.

### Rainfall.

The rainfall data of India are now issued annually in a separate volume entitled "Rainfall of India." The twenty-eighth volume, that of 1918, contains the whole rainfall data of 2,905 stations which are there classified under their respective administrative divisions according to the following scheme :—

PROVINCE.	Number of stations.
Burma	213
Assam	125
Bengal	230
Bihar and Orissa	300
United Provinces of Agra and Oudh	275
Punjab	190
Kashmir	39
North-West Frontier Province	36
Baluchistan	90
Rajputana	186
Bombay	289
Central India	122
Central Provinces	189
Hyderabad	19
Mysore	77
Coorg	10
Madras (including Pudukkottai, Travancore and Cochin)	515
TOTAL	2,905

The information includes monthly statements of—

- (a) the actual rainfall, day by day, of all the rainfall stations;
- (b) the total rainfall of the month;
- (c) the number of rainy days during the month;
- (d) the average or normal rainfall of the month of all stations for which rainfall data of at least five years are available;
- (e) the average or normal number of rainy days of the month for all stations for which rainfall data of five years or upwards are available.

Symon's rain-gauges are now used at all rain-gauge stations with the exception of those in Mysore. The time of measuring rainfall is 8 hours by local time throughout India, and the amounts registered give the rainfall of the previous 24 hours, and hence generally of the previous civil day.

The tables 30 to 32 give summaries of the rainfall data of the year. The first and second tables give average rainfall data based on the returns of about 2,400 rain-gauge stations for the 15 chief political divisions and the 33 sub-divisions respectively, while the third table (Table 32) contains data of the number of rainy days for the 33 sub-divisions for the four seasons into which the year has been divided.

The normals employed in this section are based on all the available records ending in 1910 and are given in Parts I and II of Volume XXII of the Memoirs of the Indian Meteorological Department.

TABLE 30.—Average over the 15 chief political divisions of the actual and normal rainfall for the four seasons of the year 1918 and for the whole year.

DIVISION.	JANUARY AND FEBRUARY.				MARCH TO MAY.				JUNE TO SEPTEMBER.				OCTOBER TO DECEMBER.				WHOLE YEAR.							
	Actual.		Normal.		Departure from normal.		Percentage departure from normal.		Actual.		Normal.		Departure from normal.		Percentage departure from normal.		Actual.		Normal.		Departure from normal.			
			"	"	"	"	"	"			"	"	"	"		"			"	"	"	"		
Burma . . . . .	0'07	0'31	-0'24	-77	"	"	"	"	18'44	10'54	+7'90	+75	50'64	50'74	-0'10	0	8'16	9'24	-1'08	-12	86'31	79'83	+6'48	+8
Assam . . . . .	0'81	2'24	-1'43	-64	22'04	25'86	-2'92	-11	83'43	64'14	+18'89	+29	3'26	6'82	-3'36	-51	110'44	99'28	+11'18	+11				
Bengal . . . . .	0'04	1'39	-1'35	-07	16'33	12'99	+3'34	+26	64'53	55'03	+9'50	+17	1'32	5'57	-4'25	-76	52'22	74'08	+7'24	+10				
Bihar and Orissa . . . .	0'11	1'44	-1'33	-02	4'02	4'12	+0'80	+10	43'53	42'09	+1'44	+3	0'27	3'48	-3'21	-92	48'83	51'13	-2'30	-6				
United Provinces . . . .	0'21	1'68	-1'37	-87	1'20	1'41	-0'21	-15	10'53	33'46	-13'92	-42	0'15	1'84	-1'69	-92	21'09	38'28	-17'19	-45				
Punjab . . . . .	0'25	2'05	-1'80	-88	3'66	1'94	+1'72	+89	7'26	15'65	-7'79	-52	0'40	0'76	0'36	-47	11'57	19'80	-8'23	-42				
North-West Frontier Province .	0'36	2'84	-2'48	-87	7'44	4'44	+3'00	+68	5'35	5'39	-3'04	-86	1'04	1'29	-0'25	-19	14'19	18'96	-2'77	-16				
Sind . . . . .	0	0'52	-0'52	-100	0'38	0'46	-0'08	-17	0'99	5'32	-4'83	-81	0'20	0'18	+0'02	+11	1'57	6'48	-4'01	-76				
Rajputana . . . . .	0'18	0'64	-0'46	-72	0'23	0'81	-0'58	-72	7'87	18'30	-10'43	-57	0'12	0'69	-6'57	-83	8'40	20'44	-12'04	-59				
Bombay . . . . .	0'14	0'17	-0'03	-18	4'52	1'44	+2'08	+14	19'06	40'51	-21'45	-63	1'81	3'24	-1'43	-44	25'53	45'36	-18'63	-44				
Central India . . . .	0'07	0'81	-0'74	-91	0'43	0'78	-0'35	-45	19'20	31'53	-12'33	-89	0'72	1'36	-0'64	-47	20'42	34'48	-14'06	-41				
Central Provinces . . . .	0'39	1'06	-0'67	-63	2'42	1'55	+0'87	+56	34'48	39'68	-5'20	-13	1'11	2'48	-1'37	-55	38'40	44'77	-6'37	-14				
Hyderabad . . . . .	0'46	0'36	+0'10	+28	4'81	1'79	+3'02	+169	15'69	28'71	-11'02	-41	1'76	3'68	-1'92	-62	22'72	32'54	-9'82	-30				
Mysore . . . . .	0'52	0'21	+0'31	+148	6'52	5'97	+1'15	+21	11'79	22'46	-10'67	-48	9'13	8'04	+1'09	+14	27'96	36'08	-8'12	-23				
Madras . . . . .	2'72	0'94	+1'78	+189	8'62	4'50	+2'12	+47	15'82	24'25	-8'53	-35	14'91	14'08	+0'83	+6	40'07	43'77	-3'70	-8				
Mean of India . . . .	0'46	0'98	-0'59	-54	6'40	4'52	+1'88	+42	28'12	34'87	-6'55	-19	8'27	4'49	-1'22	-27	38'25	43'67	-6'43	-14				

TABLE 31.—Average over the 33 sub-divisions of the actual and normal rainfall for the four seasons of the year 1918, and for the whole year.

SUB-DIVISION.	JANUARY AND FEBRUARY.				MARCH TO MAY.				JUNE TO SEPTEMBER.				OCTOBER TO DECEMBER.				WHOLE YEAR.							
	Actual.		Normal.		Departure from normal.		Percentage departure from normal.		Actual.		Normal.		Departure from normal.		Percentage departure from normal.		Actual.		Normal.		Departure from normal.		Percentage departure from normal.	
1. Bay Islands . . .	"	"	"	"	- 8	17'65	11'00	+ 6'65	+ 60	41'42	49'43	- 5'01	- 10	16'34	16'19	+ 0'15	+ 1	79'75	78'07	+ 1'68	+ 2			
2. Lower Burma . . .	0'12	0'42	- 0'30	- 71	28'75	15'22	+ 13'53	+ 89	100'82	105'69	+ 4'18	+ 4	10'00	11'31	- 1'31	- 11	148'69	132'64	+ 16'05	+ 12				
3. Upper Burma . . .	0'05	0'24	- 0'19	- 79	11'78	7'49	+ 4'29	+ 67	27'14	29'91	- 2'77	- 9	6'99	7'87	- 0'88	- 11	45'96	45'51	+ 0'45	+ 1				
4. Assam . . .	0'81	2'24	- 1'43	- 64	22'94	25'86	- 2'92	- 11	83'43	84'54	+ 18'80	+ 29	9'28	6'62	- 3'38	- 51	110'44	99'26	+ 11'18	+ 11				
E. Bengal . . .	0'04	1'39	- 1'35	- 97	16'33	12'00	+ 3'34	+ 26	64'53	55'03	+ 9'50	+ 17	1'32	5'57	- 4'25	- 76	82'22	74'98	+ 7'24	+ 10				
6. Orissa . . .	0'20	1'49	- 1'29	- 87	7'25	5'67	+ 1'58	+ 28	38'54	44'51	- 5'97	- 18	0'45	5'70	- 5'25	- 92	46'44	57'37	- 10'88	- 19				
7. Chota Nagpur . . .	0'20	2'03	- 1'88	- 90	3'14	3'83	- 0'69	- 18	39'59	42'11	- 2'52	- 6	0'04	2'77	- 2'73	- 99	42'74	50'74	- 8'00	- 16				
8. Bihar . . .	0'02	1'14	- 1'12	- 98	4'70	3'57	+ 1'13	+ 32	47'69	41'01	+ 6'68	+ 16	0'28	2'81	- 2'52	- 90	52'70	48'53	+ 4'17	+ 9				
9. United Provinces, East .	0'02	1'21	- 1'19	- 98	0'92	1'21	- 0'29	- 24	22'34	34'42	- 12'08	- 35	0'09	2'38	- 2'20	- 96	23'37	39'22	- 15'85	- 40				
10. Do. do., West .	0'38	1'90	- 1'52	- 80	1'44	1'56	- 0'12	- 8	17'17	32'62	- 15'45	- 47	0'21	1'37	- 1'16	- 85	19'20	37'45	- 18'25	- 49				
11. Punjab, East and North .	0'30	2'36	- 2'06	- 87	3'86	2'07	+ 1'79	+ 86	8'55	17'79	- 9'24	- 52	0'43	0'88	- 0'45	- 61	13'14	23'10	- 9'96	- 43				
12. Do., Southwest .	0'12	1'11	- 0'99	- 89	3'05	1'50	+ 1'55	+ 103	3'28	6'58	- 3'30	- 50	0'35	0'39	- 0'04	- 10	6'80	9'58	- 2'78	- 29				
13. Kashmir . . .	1'70	7'82	- 6'12	- 78	15'31	9'46	+ 5'85	+ 62	12'06	20'93	- 8'87	- 42	3'92	3'40	+ 0'52	+ 15	32'99	41'61	- 8'62	- 31				
14. North-West Frontier .	0'36	2'84	- 2'48	- 87	7'44	4'44	+ 3'00	+ 69	5'35	8'39	- 3'04	- 36	1'04	1'29	- 0'25	- 19	14'19	16'96	- 2'77	- 16				
15. Baluchistan . . .	1'19	2'84	- 1'65	- 58	4'53	2'25	+ 2'28	+ 101	0'69	2'26	- 1'57	- 69	1'16	1'30	- 0'14	- 11	7'57	8'65	- 1'08	- 12				
16. Sind . . .	0	0'52	- 0'52	- 100	0'38	0'46	- 0'08	- 17	0'99	5'32	- 4'33	- 81	0'20	0'18	+ 0'02	+ 11	1'57	6'48	- 4'91	- 76				
17. Rajputana, West .	0'02	0'50	- 0'48	- 96	0'21	0'67	- 0'46	- 69	2'59	10'24	- 7'65	- 75	0'02	0'88	- 0'36	- 95	2'84	11'70	- 8'95	- 76				
18. Do., East .	0'26	0'71	- 0'46	- 65	0'24	0'86	- 0'62	- 72	10'12	21'76	- 11'64	- 53	0'16	0'86	- 0'89	- 81	10'77	24'18	- 13'41	- 55				
19. Gujarat . . .	0'02	0'16	- 0'14	- 87	0'44	0'28	+ 0'16	+ 57	11'43	31'01	- 19'58	- 63	0'03	0'90	- 0'87	- 97	11'92	32'35	- 20'43	- 63				
20. Central India, West .	0'06	0'60	- 0'54	- 90	0'44	0'67	- 0'23	- 34	19'40	29'55	- 10'06	- 34	0'66	1'21	- 0'55	- 45	20'65	32'03	- 11'38	- 36				
21. Do. do., East .	0'12	1'16	- 1'04	- 90	0'42	0'98	- 0'56	- 57	18'76	34'75	- 16'99	- 46	0'86	1'80	- 0'74	- 46	20'16	38'49	- 18'33	- 48				
22. Berar . . .	0'15	0'64	- 0'49	- 77	3'11	1'02	+ 2'09	+ 205	14'54	26'22	- 13'68	- 48	1'50	2'48	- 0'98	- 40	19'30	32'36	- 13'06	- 40				
23. Central Provinces, West .	0'32	1'07	- 0'75	- 70	1'75	1'27	+ 0'48	+ 38	30'29	39'85	- 9'56	- 24	1'28	2'37	- 1'00	- 46	33'64	44'56	- 10'92	- 25				
24. Do. do., East .	0'59	1'28	- 0'80	- 54	2'51	2'05	+ 0'46	+ 22	49'42	46'30	+ 3'12	+ 7	0'77	2'57	- 1'80	- 70	53'29	52'20	+ 1'08	+ 2				
25. Konkan . . .	0'03	0'13	- 0'10	- 77	12'96	1'74	+ 11'23	+ 645	55'03	101'98	- 46'95	- 46	2'85	4'93	- 2'08	- 42	70'87	108'78	- 37'91	- 35				
26. Bombay Deccan .	0'24	0'19	+ 0'05	+ 26	4'11	2'09	+ 2'02	+ 97	11'00	24'42	- 19'42	- 55	2'59	4'19	- 1'54	- 37	17'94	30'83	- 12'89	- 42				
27. Hyderabad, North .	0'35	0'38	+ 0'02	+ 6	4'38	1'63	+ 2'83	+ 185	18'69	29'24	- 12'55	- 43	1'64	3'43	- 1'79	- 52	23'04	34'53	- 11'40	- 33				
28. Do., South .	0'56	0'89	+ 0'17	+ 44	5'14	2'09	+ 3'05	+ 146	14'44	23'89	- 9'45	- 40	1'88	3'96	- 2'08	- 53	22'02	30'33	- 8'81	- 27				
29. Mysore . . .	0'52	0'21	+ 0'31	+ 148	6'52	5'37	+ 1'15	+ 21	11'79	22'46	- 10'67	- 48	9'13	8'04	+ 1'09	+ 14	27'98	30'08	- 8'12	- 28				
30. Malabar . . .	0'28	0'47	- 0'19	- 40	32'45	10'18	+ 22'27	+ 219	54'68	101'40	- 46'73	- 46	16'62	16'05	+ 3'47	+ 23	105'93	127'10	- 21'17	- 17				
31. Madras, Southeast .	4'38	1'86	+ 2'97	+ 218	4'03	4'58	- 0'55	- 12	6'70	11'70	- 5'00	- 43	20'25	17'83	+ 2'42	+ 14	35'31	35'47	- 0'16	0				
32. Do., Deccan .	0'62	0'28	+ 0'39	+ 170	3'51	2'41	+ 1'10	+ 46	10'16	15'06	- 4'90	- 38	5'46	6'67	- 1'11	- 17	19'75	24'27	- 4'52	- 19				
33. Do., Coast, North .	1'68	0'66	+ 1'w2	+ 155	4'24	3'46	+ 0'78	+ 23	21'31	25'19	- 3'88	- 15	8'71	10'64	- 1'98	- 18	35'94	39'95	- 4'01	- 10				

TABLE 32.—Average over the 33 sub-divisions of the actual and normal number of rainy days for the four seasons of the year 1918, and for the whole year.

SUB-DIVISION.	JANUARY AND FEBRUARY.			MARCH TO MAY.			JUNE TO SEPTEMBER.			OCTOBER TO DECEMBER.			WHOLE YEAR.		
	Actual.	Normal.	Departure from normal.	Actual.	Normal.	Departure from normal.	Actual.	Normal.	Departure from normal.	Actual.	Normal.	Departure from normal.	Actual.	Normal.	Departure from normal.
1. Bay Islands . . . . . . . .	3·5	2·0	+1·5	21·5	17·5	+4·0	58·0	74·2	-16·2	28·5	26·7	+1·8	111·5	120·4	-8·9
2. Lower Burma . . . . . . . .	0·5	0·6	-0·1	21·7	15·9	+5·8	93·4	88·5	+4·9	13·2	14·5	-1·3	128·8	119·5	+9·3
3. Upper Burma . . . . . . . .	0·1	0·7	-0·6	15·3	11·0	+4·3	38·8	41·9	-3·1	11·5	11·0	+0·6	65·7	64·6	+1·1
4. Assam . . . . . . . .	2·7	5·1	-2·4	29·6	32·9	-3·3	75·2	68·2	+7·0	6·0	8·7	-2·1	113·5	114·9	-1·4
5. Bengal . . . . . . . .	0·1	2·6	-2·5	17·4	15·4	+2·0	65·8	69·9	+5·0	2·2	6·1	-3·9	85·5	88·9	+1·6
6. Orissa . . . . . . . .	0·5	2·3	-1·8	12·1	9·2	+2·9	48·1	54·0	-5·9	1·1	6·8	-5·7	61·8	72·3	-10·5
7. Chota Nagpur . . . . . . . .	0·8	4·3	-3·5	6·3	7·0	-0·7	50·6	51·8	-1·2	0·1	4·2	-4·1	57·8	87·3	-9·5
8. Bihar . . . . . . . .	0·1	2·8	-2·7	6·8	5·5	+1·3	45·7	45·1	-0·6	0·3	3·5	-3·2	52·9	56·9	-4·0
9. United Provinces, East . . . . . . . .	0·2	2·7	-2·5	2·3	2·4	-0·1	20·8	38·1	-8·3	0·4	2·5	-2·1	32·7	45·7	-18·0
10. Do. do., West . . . . . . . .	1·0	3·7	-2·7	3·4	3·2	+0·2	21·5	34·1	-12·0	0·6	1·9	-1·3	26·5	42·0	-16·4
11. Punjab, East and North . . . . . . . .	1·0	4·4	-3·4	7·5	4·2	+3·3	11·4	19·7	-8·3	1·1	1·5	-0·4	21·0	29·8	-8·8
12. Do., Southwest . . . . . . . .	0·4	2·6	-2·2	7·3	3·5	+3·8	5·6	8·6	-3·0	1·2	0·8	+0·4	14·5	15·5	-1·0
13. Kashmir . . . . . . . .	4·2	9·0	-5·7	17·4	14·6	+2·8	18·1	24·1	-6·0	3·2	4·5	-1·3	42·9	53·1	-10·2
14. North-West Frontier Province , . . . . .	1·3	5·6	-4·3	13·5	9·0	+4·5	10·8	12·3	-1·5	3·3	2·1	+1·2	28·9	29·0	-0·1
15. Baluchistan , . . . . . . . .	3·3	6·0	-2·7	8·8	5·3	+3·5	1·8	3·3	-2·0	2·8	2·6	+0·2	16·9	17·2	-1·0
16. Sind . . . . . . . .	0	1·4	-1·4	1·2	1·0	+0·2	1·1	6·1	-5·0	1·0	0·3	+0·7	3·3	8·8	-5·5
17. Rajputana, West . . . . . . . .	0	1·1	-1·1	0·6	1·1	-0·5	3·9	14·7	-10·8	0·1	0·5	-0·4	4·6	17·4	-12·8
18. Do., East . . . . . . . .	0·6	1·7	-1·1	0·9	1·9	-1·0	13·5	27·7	-14·2	0·4	1·3	-0·9	15·4	32·6	-17·2
19. Gujarat . . . . . . . .	0	0·4	-0·4	1·0	0·5	+0·5	13·8	34·8	-21·0	0·1	1·3	-1·2	14·9	37·0	-22·1
20. Central India, West . . . . . . . .	0·2	1·4	-1·2	1·2	1·3	-0·1	23·8	37·9	-14·1	1·1	1·7	-0·6	26·3	42·3	-16·0
21. Do. do., East . . . . . . . .	0·4	2·4	-2·0	1·1	1·9	-0·8	26·1	37·2	-11·1	1·6	2·1	-0·6	29·2	48·6	-14·4
22. Berar . . . . . . . .	0·5	1·2	-0·7	4·7	2·3	+2·4	23·8	38·7	-14·9	2·3	3·6	-1·3	31·3	45·8	-14·5
23. Central Provinces, West . . . . . . . .	0·8	2·1	-1·3	3·2	2·6	+0·6	36·4	47·7	-11·3	2·0	3·2	-1·2	42·4	55·6	-13·2
24. Do. do., East . . . . . . . .	1·9	2·2	-0·3	4·7	4·3	+0·4	40·7	49·8	+0·4	1·9	3·7	-1·8	58·2	59·6	-1·8
25. Konkan . . . . . . . .	0	0·3	-0·3	11·4	2·5	+8·9	61·9	85·0	-23·1	4·6	7·0	-2·4	77·9	94·8	-16·0
26. Bombay Deccan . . . . . . . .	0·5	0·5	0	7·2	4·0	+3·2	20·3	37·4	-17·1	4·4	6·3	-1·9	32·4	48·2	-15·8
27. Hyderabad, North . . . . . . . .	1·4	0·7	+0·7	7·2	3·4	+9·8	29·4	41·0	-11·6	2·7	5·2	-2·5	40·7	50·3	-9·6
28. Do., South . . . . . . . .	1·7	0·8	+0·9	8·1	4·3	+8·8	26·8	37·6	-10·8	3·3	6·3	-8·0	39·9	49·0	-9·1
29. Mysore . . . . . . . .	1·1	0·4	+0·7	11·7	9·0	+2·7	21·7	33·6	-11·9	13·0	12·1	+0·9	47·6	55·1	-7·6
30. Malabar . . . . . . . .	0·6	0·5	+0·1	24·3	12·5	+11·8	69·3	85·8	-16·5	22·7	18·7	+4·0	116·9	117·5	-0·6
31. Madras, Southeast . . . . . . . .	5·4	2·0	+3·4	6·2	6·9	-0·7	12·0	18·0	-6·0	23·0	21·1	+2·8	47·5	48·0	-0·5
32. Do., Deccan . . . . . . . .	1·5	0·2	+1·3	6·1	4·4	+1·7	17·6	25·1	-7·5	8·4	9·6	-1·2	33·6	39·3	-5·7
33. Do., Coast, North . . . . . . . .	2·2	0·8	+1·4	6·8	5·5	+1·3	33·3	38·8	-5·0	9·6	10·9	-1·5	51·7	58·5	-1·8

**I. The cold weather period.**—Several disturbances of the cold weather type appeared in the north, but they were all feeble and gave little rain or snow in northern and central India. In the Peninsula on the other hand conditions were unusually disturbed during January, and very heavy rain for the time of year occurred except in the west coast districts.

The combined rainfall of January and February was markedly above normal in Hyderabad South, Mysore and Madras excluding Malabar; the excess amounted to about 3" in Madras Southeast and 1" on the Madras Coast North. The rainfall was equal to the small normal amount in the Bay Islands and Hyderabad North, and was below normal over the rest of the country. The deficiency was as much as 6" in Kashmir, 2½" in the North-West Frontier Province and a little over 2" in the Punjab East and North; it varied between 1" and 2" in Assam, Bengal, Bihar and Orissa, the United Provinces, the Punjab Southwest, Baluchistan and Central India East. There was practically no rain in Bengal, Bihar, the United Provinces East, Sind, Rajputana West, Gujarat and the Konkan, whereas under ordinary conditions more than an inch is received in the first three areas, and half an inch in Sind and Rajputana West.

The deficiency of winter precipitation was much less pronounced in Persia than in northern India. In the Indian Ocean rainfall was in excess at Seychelles and Mauritius and in defect at Zanzibar.

**II. The hot weather period.**—In March winter depressions were more active than usual and produced abundant rain and snow in Kashmir, the Punjab, the North-West Frontier Province and Baluchistan. Rainfall was in considerable excess also in Assam, Hyderabad South, the Konkan, Mysore and Madras Southeast; but over the rest of the country rainfall was either normal or in defect. Similar conditions prevailed in April when very heavy rain for the time of year fell in the Punjab, Kashmir, the North-West Frontier Province, the United Provinces West and Bihar. In May the chief feature was the occurrence of an unusually early burst of monsoon rainfall in the Peninsula during the second fortnight. A small storm formed over the Bay on the 20th, and travelling to the Chittagong coast it carried the monsoon rains into Upper Burma and Bengal. The total rainfall of the month in the plains exceeded the normal by 1·94" or 72 per cent, and was particularly heavy in Burma, Bombay, Central Provinces, Hyderabad and Malabar. In northwest India on the other hand the weather was generally drier than usual.

The total rainfall of the period was about 7½ times the normal amount in the Konkan, thrice the normal in Berar, Hyderabad North and Malabar and between 2 and 2½ times in the Punjab Southwest, Baluchistan, the Bombay Deccan and Hyderabad South. Rainfall was in large excess also in Burma, the Punjab East and North, the North-West Frontier Province and Gujarat. The only divisions recording a serious deficiency were Rajputana and Central India.

Precipitation was above the average in Persia. At Zanzibar and Seychelles rainfall was in defect, but at Mauritius it was in excess.

**III. The southwest monsoon period.**—The Arabian Sea monsoon appeared on the Malabar coast on May 11th, nearly

three weeks before its normal date, and extending slowly northwards during the remainder of the month gave widespread and unusually heavy rain over nearly the whole of the Peninsula. Its activity then began to decline and from the fourth week of June to about the middle of August the current was extremely weak. An appreciable improvement then occurred and lasted till the 2nd of September, when a complete break set in over the Punjab. This extended eastwards and southwards, and by the middle of the third week there was practically no monsoon in northern and central India. The Bay monsoon arrived in Bengal on the 27th May, upwards of two weeks earlier than usual; it was decidedly strong in June and August, appreciably weaker than usual in July, and of about the average intensity in September. Its activity was however confined during nearly the whole season to Burma and northeast India.

A conspicuous feature of the season was the small number of cyclonic storms.

The rainfall of the whole period June to September was abundant in Assam, Bengal and Bihar; it was within 10 per cent of normal in Burma, Chota Nagpur and the Central Provinces East, and was below normal in all the other divisions. The deficiency was comparatively small, between 10 and 25 per cent, in the Bay Islands, Orissa, the Central Provinces West and the Madras Coast North; but it exceeded 30 per cent over the rest of the area of scanty fall, and was as much as 81 per cent in Sind, 75 per cent in Rajputana West, 69 per cent in Baluchistan, 63 per cent, in Gujarat and between 40 and 60 per cent in the Bombay Deccan, the United Provinces West, the Punjab, Kashmir, Rajputana East, Central India East, Berar, the Konkan, Hyderabad, Mysore, Malabar and Madras Southeast.

On the average of the whole of the plains there was a defect of 6·5" or 19 per cent. The largest deficiencies hitherto on record are 6·5" in 1889 and 7·9" in 1877.

At Zanzibar and Mauritius rainfall was in excess in June and July and in defect in the next two months; at Seychelles, on the other hand, it was in defect in June, July and August and in large excess in September.

**IV.—The retreating southwest monsoon period.**—The monsoon was extremely weak in October, very vigorous in November and normally active in December. Disturbances of the winter type were more numerous than usual, but they produced rain chiefly along the northwest frontier and in Kashmir.

The total rainfall of the season exceeded the normal only in Kashmir, Sind, Mysore, Malabar and Madras Southeast. Over the rest of the country the fall was either normal or below it; the shortage averaged about 5" in Orissa, 4" in Bengal, 3" in Assam and Chota Nagpur, 2½" in Bihar and 2" in the United Provinces East, the Central Provinces East, the Konkan, Hyderabad and the Madras Coast North.

Precipitation was above normal at Kashgar, but below it mostly in Persia. At the Indian Ocean stations rainfall was on the whole in defect.

**The year.—I.**—During the cold weather period rainfall was very scanty throughout northern and central India, and was abnormally heavy in Mysore and Madras excluding Malabar.

II.—The hot weather rainfall was more or less in defect in Assam, Chota Nagpur, the United Provinces, Sind, Rajputana, Central India and Madras Southeast, but was in moderate to large excess over the rest of the country.

III.—The monsoon set in earlier than usual, but was very weak over nearly the whole country outside of Burma and northeast India. The deficiency in the seasonal rainfall was as much as 81 per cent in Sind, 75 per cent in Rajputana West, 69 per cent in Baluchistan, 63 per cent in Gujarat and about 50 per cent in the United Provinces West, the Punjab, Rajputana East, Central India East, Berar, the Konkan, the Bombay Deccan, Mysore and Malabar.

IV.—The period, October to December, was also unusually dry; Kashmir, Sind, Mysore, Malabar and Madras Southeast were the only divisions where the seasonal rainfall equalled or exceeded the normal. The United Provinces and Bihar and Orissa obtained only 8 per cent of the normal

amount, Rajputana 17 per cent, Bengal 24 per cent, the Central Provinces 45 per cent, and Assam, the Punjab and Central India about 50 per cent.

V. The total rainfall of the year fell short of the normal by 6·4" or 14 per cent. The defect occurred mainly in the field of the Arabian Sea current, and was most pronounced—over 40 per cent—in the United Provinces, the Punjab East and North, Sind, Rajputana, Gujarat, Central India East and the Bombay Deccan. The shortage of rainfall over the whole of India has exceeded this figure only in 1899, when the deficiency amounted to nearly  $11\frac{1}{2}$  inches. In other years of scanty rainfall the deficiency has not been more than about  $5\frac{1}{2}$  inches.

S. SITARAMAYYA,

*Scientific Assistant.*

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**Table A.—Abstract of observations taken at 10 hrs. and 16 hrs.  
at 12 stations in India, etc., in the year 1918.**

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*Abstract of observations taken at 10 hrs. and 16 hrs.*

Number of sub-division.	STATION.	Height of barometer above sea-level in feet.	PRESSURE.							TEMPERATURE OF AIR.																								
			Mean of 10 hrs.				Mean of daily range.			Mean reduced to sea-level and to gravity at 45° Lat.				Mean maximum.			Mean minimum.		Mean daily range.		Highest maximum.		Lowest minimum.		Absolute range.		Mean 10 hrs.		Mean 16 hrs.		Mean of daily means.		Departure from normal.	
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27					
1																																		
5	III.—Bengal.																																	
5	Calcutta	• • • • • •	21	29·843	29·728	·115	29·784	-·004	29·752	87·4	70·3	17·1	101·2	47·8	53·4	81·2	84·7	78·2	+0·0															
11	VI.—Punjab.																																	
11	Lahore	• • • • • •	702	29·121	29·029	·002	29·067	-·004	29·737	89·6	63·0	28·6	115·8	34·7	81·1	78·6	88·5	75·2	+0·0															
18	IX.—Rajputana.																																	
18	Jaipur	• • • • • •	1,431	28·452	28·347	·105	28·394	+·017	29·754	91·5	65·6	25·9	114·0	30·2	77·8	82·7	89·8	77·4	+0·0															
25	X.—Bombay.																																	
25	Bombay	• • • • • •	37	29·877	29·779	·090	29·837	+·010	29·814	86·8	75·4	11·4	92·6	61·3	32·3	80·9	83·2	80·2	+0·0															
29	XIV.—Mysore.																																	
29	Bangalore	• • • • • •	3,021	28·971	26·857	·114	26·917	+·016	29·750	84·8	64·1	20·7	97·3	51·6	45·7	76·8	62·1	73·1	+0·0															
31	XV.—Madras.																																	
31	Trivandrum	• • • • • •	108	29·751	29·648	·103	29·704	...	29·831	84·1	76·1	9·0	90·7	65·7	25·0	81·3	82·6	78·3	...															
	Pudukkottai	• • • • • •	318	29·619	29·479	·140	29·549	...	29·793	94·1	74·6	19·5	105·5	61·9	48·6	85·1	80·9	84·8	...															
	Madras	• • • • • •	22	29·897	29·783	·114	29·845	+·002	29·797	91·1	75·1	16·0	104·1	60·8	43·8	86·0	86·3	82·0	+0·2															
	Hill stations, excluding Kashmir and Baluchistan.																																	
	Katmandu	• • • • • •	4,388	25·623	25·550	·073	25·583	+·018	25·537	77·9	53·3	24·6	91·4	29·4	62·0	57·1	73·3	65·4	+0·8															
	Kodaikanal	• • • • • •	7,688	22·846	21·787	·059	22·817	...	22·751	85·3	49·8	15·5	78·4	37·2	39·2	60·9	59·4	57·6	...															
	Extra India.																																	
	Seychelles	• • • • • •	15	29·997	29·910	·087	29·960	+·016†	29·898	82·5	77·4	5·1	87·0	72·3	14·7	80·6	81·4	78·7	+0·5†															
	Mauritius	• • • • • •	181	...	...	...	...	29·891	+·014	29·967	79·7	66·0	18·7	91·4	51·8	40·1	...	...	73·4	-0·9														

N. B.—Elevations in italics indicate barometric determinations.

Note.—The barometric readings are not reduced to sea-level, in the case of hill or plateau stations, the elevations of which exceed 3,000 feet.

A.

at 12 stations in India, etc., in the year 1918.

TEMPERATURE, WET-BULB.				VAPOUR TENSION IN INCHES OF MERCURY.				HUMIDITY.				CLOUD.				RAINFALL.				STATION.	Number of sub-division.
Mean minimum.	Mean 10 hrs.	Mean 16 hrs.	Mean of three previous columns.	From minimum.	Mean 10 hrs.	Mean 16 hrs.	Mean of daily means.	From minimum.	Mean 10 hrs.	Mean 16 hrs.	Mean of daily means.	From minimum.	Mean 10 hrs.	Mean 16 hrs.	Mean of two previous columns.	Departure normal.	Total rainfall for the year.	Heaviest rainfall during the year.			
20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
68.2	73.0	73.1	71.4	-695	-729	-681	-717	-0.027	80	66	56	78	-4	4.4	5.0	4.7	+0.1	58.37	4.83	Calcutta	5
57.8	65.4	68.7	64.0	-458	-492	-468	-483	-0.015	74	49	35	55	-1	1.9	1.9	1.9	-1.0	11.50	1.87	Lahore	11
57.5	64.6	66.0	62.7	-415	-412	-369	-406	-0.059	60	34	25	43	-10	2.2	3.3	2.7	-1.0	8.82	1.78	Jaipur	18
60.9	73.8	75.4	73.1	-668	-740	-780	-748	-0.044	74	70	68	73	-5	3.7	3.7	3.7	-0.1	35.54	5.34	Bombay	25
61.8	60.4	68.7	64.9	-530	-531	-470	-523	-0.019	88	58	45	66	-2	4.0	5.8	5.3	...	32.51	8.74	Bangalore	30
...	74.0	76.8	...	...	780	804	...	...	76	73	...	...	...	6.3	6.8	6.6	...	56.43	2.95	Trivandrum	31
...	72.8	73.2	...	...	643	579	...	...	54	42	...	...	...	4.2	5.1	4.7	...	28.56	2.19	Padukkottai	
72.6	76.4	77.2	75.4	-770	-781	-815	-806	-0.003	89	64	66	75	-1	4.6	4.8	4.7	-0.3	75.00	6.23	Madras.	
Hill stations, excluding Kashmir and Baluchistan.																					
51.2	59.6	62.0	57.6	-387	-454	-440	-431	-0.018	86	64	52	69	-4	4.3	4.7	4.5	...	42.88	2.35	Katmandu.	
46.1	53.8	64.8	51.5	-278	-348	-383	-334	...	77	65	77	73	...	4.9	7.4	6.1	...	57.37	2.48	Kodaikanal.	
Extra India.																					
70.5	75.1	75.6	73.7	-657	-801	-806	-773	-0.038	60	76	73	74	-7	5.4	6.1	5.7	-0.5†	83.54	5.15	Seychelles.	
...	...	...	67.4	...	...	...	-761	+141	...	...	...	76	0	...	...	5.7	...	60.10	3.87	Mauritius.	

† Departure from old normal.

**Table B.—Abstract of observations taken at 8 hrs. at 215 stations in India, etc., in the year 1918.**

(1) Provincial means.

(2) Data of stations.

(1) Provincial means based on the material in Table B (2) except that the statement of rainfall depends on the complete data of about 2,300 stations.

DIVISION.	Pressure departure from normal of year.	TEMPERATURE OF AIR.						WIND	HYGROMETRY.			CLOUD.	RAINFALL.				
		Mean maximum of year.	Departure from normal of year.	Mean minimum of year.	Departure from normal of year.	Yearly mean of mean between maximum and minimum.	Departure from normal of year.		Mean daily range of temperature.	Departure of velocity from normal.	Mean humidity of year.		Mean cloud amount of year.	Departure from normal of year.	Rainfall of year.	Normal rainfall of year.	Departure from normal of years.
Burma . . . . . . .	+·004	86·8	-0·9	70·2	-0·3	78·5	-0·6	16·6	+0·6	84	-1	·746	-·014	5·7	+0·8	86·81	79·83 +6·48
Assam . . . . . . .	-·003	83·7	-0·1	66·1	-0·2	74·9	-0·2	17·6	0	89	-1	·690	-·010	5·0	-0·4	110·44	99·26 +11·18
Bengal . . . . . . .	0	85·9	-0·4	68·8	-0·7	77·4	-0·5	17·1	-0·7	83	-1	·727	-·025	4·6	+0·3	82·22	74·98 +7·24
Bihar and Orissa . . . . . . .	+·008	88·2	-0·1	67·6	-1·0	77·9	-0·6	20·6	-0·1	72	-3	·635	-·032	4·0	+0·5	48·83	51·18 -2·30
United Provinces of Agra and Oudh . . . . . . .	+·009	90·1	+0·8	65·5	-0·5	77·8	+0·1	24·6	-0·2	62	-6	·535	-·041	2·3	-0·6	21·09	38·28 -17·19
Punjab . . . . . . .	+·004	89·4	+0·2	63·3	-0·1	76·3	+0·1	26·1	+0·4	60	-2	·474	-·020	2·0	-0·4	11·57	19·80 -8·23
North-West Frontier Province . . . . . . .	+·001	88·7	+1·1	61·1	+0·8	74·9	+0·7	27·7	-0·7	61	-3	·460	-·027	1·9	-0·6	14·19	16·96 -2·77
Sind . . . . . . .	+·015	90·7	-0·4	67·9	-0·4	79·3	-0·4	22·8	-0·5	63	0	·567	-·015	1·7	-0·2	1·57	6·48 -4·91
Rajputana . . . . . . .	+·016	91·8	+0·2	66·5	-0·5	79·1	-0·2	25·2	+0·4	50	-4	·441	-·041	2·2	-0·5	8·40	20·44 -12·04
Bombay . . . . . . .	+·009	90·2	+0·5	68·6	-0·1	79·4	+0·2	21·7	-0·9	64	-4	·596	-·033	3·5	0	25·53	45·86 -19·83
Central India . . . . . . .	+·013	89·6	+0·9	64·5	-0·5	77·1	+0·3	25·1	-0·2	58	-3	·490	-·029	3·0	-0·5	20·42	34·48 -14·06
Central Provinces . . . . . . .	+·015	90·1	+0·3	66·6	-0·3	78·3	0	28·4	+0·3	57	-5	·490	-·040	3·4	-0·1	38·40	44·77 -6·37
Hyderabad . . . . . . .	+·016	91·8	+0·5	67·5	+0·8	79·7	+0·4	24·3	-0·1	61	-3	·558	-·027	3·9	+0·4	22·72	32·54 -9·82
Mysore . . . . . . .	+·009	85·5	+0·2	65·1	+0·1	75·3	+0·1	20·4	+0·7	75	-1	·568	-·019	4·8	-0·5	27·96	36·08 -8·12
Madras . . . . . . .	+·008	90·3	-0·1	74·0	+0·1	82·1	0	16·3	+0·6	76	-1	·753	-·014	4·5	-0·2	40·07	43·77 -8·70

TABLE

(2) Abstract of observations taken at 8 hrs. at 215

Number of sub-division	STATION.	Height of barostern above sea-level in feet.	PRESSURE, 8 HRS., IN INCHES.										TEMPERATURE OF AIR.							
			Mean 8 hrs. pressure reduced to 32°.		Departure from normal of year.		Mean 8 hrs. pressure reduced to sea-level and to constant gravity at 45° Lat.		Highest pressure of year.		Lowest pressure of year.		Mean of 8 hrs. dry bulb of year.		Mean maximum of year.		Departure from normal of year.		Mean minimum of year.	
			3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	
<b>I.—Burma.</b>																				
2	Victoria Point . . . . .	147	29.703	...	29.871	29.932	29.680	78.4	76.3	84.8	...	74.3	...	79.5	...	10.6	94.6	67.3		
	Mergui . . . . .	66	29.883	+0.15	29.870	30.048	29.730	76.2	73.9	86.0	-1.5	72.1	+0.3	79.1	-0.6	13.9	94.8	61.0		
	Tavoy . . . . .	19	29.917	-0.06	29.860	30.071	29.750	76.0	73.3	87.4	-0.4	69.0	-2.6*	78.2	-1.5*	18.3	95.0	52.8		
	Moulmein . . . . .	94	29.83	+0.07	29.878	30.051	29.620	76.5	73.1	87.1	-1.0	72.2	-0.3	79.6	-0.7	14.9	98.2	59.5		
	Rangoon . . . . .	18	29.907	+0.15	29.863	30.106	29.654	76.4	73.5	89.1	-0.2	72.5	-0.5	80.8	-0.3	16.6	100.3	59.0		
	Bassein . . . . .	27	29.907	+0.16	29.861	30.119	29.630	77.6	74.6	89.6	+0.6	72.6	+0.1	80.6	+0.3	16.1	100.0	66.9		
	Diamond Island . . . . .	41	29.861	-0.04	29.837	30.052	29.612	80.1	76.5	81.9	-0.4	76.1	+0.4	80.5	0	8.9	90.6	80.8		
	Toungoo . . . . .	164	29.749	-0.12	29.857	29.976	29.481	75.7	72.7	80.0	-1.1	70.2	-0.3	79.6	-0.7	18.7	102.6	49.9		
	Kyaunkpyu . . . . .	18	29.872	...	29.830	30.108	29.509	77.0	73.8	83.0	...	72.7	...	78.3	...	11.1	92.9	57.2		
	Akyab . . . . .	20	29.856	-0.11	29.817	30.090	29.443	75.2	72.6	84.4	-1.5	69.7	-2.4	77.1	-1.9	14.7	92.4	51.0		
3	Minbu . . . . .	165	29.721	-0.04	29.831	29.993	29.387	76.0	70.4	89.8	-1.8	71.7	+0.3	80.7	-0.7	18.1	104.7	49.0		
	Yamethin . . . . .	644	29.247	+0.06	29.840	29.479	28.809	74.9	70.4	89.5	-1.8	70.1	+0.5	79.8	-0.7	19.4	104.3	47.8		
	Mandalay . . . . .	250	29.648	+0.11	29.846	29.927	29.347	77.8	70.7	92.5	-0.1	71.4	+0.1	81.9	0	21.1	107.2	48.5		
	Monywa . . . . .	280	29.617	+0.07	29.840	29.805	29.270	75.2	69.9	80.7	-0.5	70.9	-0.2	80.8	-0.3	19.8	106.2	48.1		
	Lashio . . . . .	2,820	27.107	-0.02	27.053	27.268	26.852	65.4	62.7	80.1	-2.0	61.0	+0.7	70.5	-0.7	19.1	92.5	38.0		
	Ehmo . . . . .	361	29.510	+0.04	29.883	29.802	29.187	69.1	67.5	84.3*	-1.2*	62.9	-2.2	73.3*	-1.6*	22.2*	97.4	39.2		
	Myitkyina . . . . .	458	29.110	0	29.841	29.896	29.072	69.3	66.8	83.9	-0.4	64.4	-1.4	74.1	-0.9	19.4	90.4	40.0		
<b>II.—Assam.</b>																				
4	Dibrugarh . . . . .	353	29.528	-0.12	29.846	29.829	29.156	69.0	66.9	81.3	+0.5	65.1	+0.2	73.2	+0.3	16.2	96.7	41.6		
	Sibsagar . . . . .	333	29.554	-0.09	29.855	29.874	29.187	68.7	67.1	80.7	-0.8	65.4	-0.4	73.1	-0.6	15.3	95.2	40.8		
	Tezpur . . . . .	252	29.635	+0.05	29.852	29.836	29.287	69.3	67.3	83.2	+0.1	68.7	-0.1	74.8	0	10.5	96.9	44.8		
	Gauhati . . . . .	196	29.087	-0.03	29.843	30.000	29.207	71.3	68.7	84.2	-0.4	66.1	+0.2	75.2	-0.1	18.1	100.8	40.6		
	Dhubri . . . . .	115	29.749	-0.02	29.821	30.068	29.364	72.6	69.4	82.7	-0.2	68.5	+0.6	75.5	+0.2	14.2	93.3	47.3		
	Silchar . . . . .	104	29.793	+0.05	29.852	30.088	29.397	71.9	69.7	86.7	-0.4	68.9	-0.6	78.3	-0.5	18.8	98.2	44.2		
	Srimangal . . . . .	66	29.818	...	29.835	30.096	29.431	70.1	67.9	87.9	+0.4	63.9	-1.6	75.9	-0.6	23.9	98.7	37.8		
<b>III.—Bengal.</b>																				
5	Cox's Bazar . . . . .	36	29.835	...	29.816	30.081	29.830	74.9	72.0	84.2	...	68.7	...	78.4	...	15.6	91.2	49.5		
	Chittagong . . . . .	87	29.787	-0.02	29.821	30.049	29.373	73.1	70.8	84.7	-0.1	68.1	-1.3	76.5	-0.7	10.6	91.2	49.6		
	Noakhali . . . . .	43	29.833	+0.07	29.824	30.118	29.434	74.8	71.9	84.7	+0.1	69.6	+0.7	77.2	+0.4	15.1	93.6	47.8		
	Barisal . . . . .	12	29.848	+0.01	29.807	30.127	29.465	75.2	71.9	84.7	-1.2	69.7	-0.6	77.2	-0.9	15.1	95.8	46.4		
	Narayanganj . . . . .	26	29.836	-0.02	29.811	30.134	29.450	74.4	70.9	85.6	-0.7	69.7	-0.8	77.6	-0.7	15.9	97.5	46.0		
	Mymensingh . . . . .	63	29.805	+0.02	29.820	30.119	29.416	78.1	70.1	84.9	+0.2	68.8	+0.2	76.8	+0.2	16.1	97.0	45.8		
	Bogra . . . . .	76	29.781	-0.03	29.809	30.097	29.400	72.7	69.6	85.9	-0.4	67.5	-0.6	76.7	-0.5	18.4	106.2	44.3		
	Dinajpur . . . . .	123	29.723	-0.05	29.806	30.038	29.327	71.5	68.1	85.3	-0.8	68.6	-0.1	75.9	-0.5	18.7	97.3	41.0		
	Jalpaiguri . . . . .	283	29.581	+0.03	29.828	29.902	29.205	69.9	67.7	84.3	+0.3	65.8	-0.3	76.1	0	18.6	97.6	48.1		
	Sauri Island . . . . .	10	29.847	+0.010	29.802	30.179	29.405	77.3	73.8	85.5	-0.1	71.7	-1.9	78.6	-1.0	18.8	98.2	46.2		

N.B.—Elevations in italics indicate barometrical determinations.  
• Mean of 11 months.

B.

stations in India, etc., in the year 1918.

WIND DIRECTION.										WIND VELOCITY.			HYGROMETRY, 8 HRS.			CLOUD.			RAINFALL.			STATION.		
Number of winds from																								
Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Mean velocity in miles per hour of year.	Normal velocity of year.	Departure from normal of year.	Mean humidity at 8 hrs. of year.	Departure from normal of year.	Mean vapour tension at 8 hrs. in inches of mercury of year.	Departure from normal of year.	Mean cloud amount at 8 hrs. of year.	Departure from normal of year.	Number of rainy days during year.	Departure from normal of year.	Normal rainfall of year.	Departure from normal of year.	Heaviest rainfall during year.		
20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44
46	17	120	38	32	14	48	32	17	6.2	...	87	...	813	...	6.4	...	149	...	139.61	109.58	-29.97	4.58	Victoria Point. (a)	
169	7	20	65	74	11	9	7	3	4.8*	1.4	+3.3*	88	+ 2	815	-0.16	3.4	-0.7	161	+ 8.3	157.92	162.94	-5.02	4.74	Mergui.
220	20	37	11	24	33	9	3	2	1.7	1.1	+0.6	87	- 2	789	-0.17	5.8	+ 1.9	154	+ 7.0	226.51	214.81	+11.70	6.35	Tavoy.
50	3	57	77	38	72	51	8	8	6.8	2.3	+4.5	84	- 3	777	-0.24	5.9	+ 0.9	158	+18.1	200.66	188.91	+11.75	6.63	Moulmein. (a)
24	48	60	24	29	75	53	31	21	3.9	3.1	+0.8	86	- 1	794	-0.12	7.2	+ 2.0	125	+ 3.6	89.41	90.10	-9.66	4.28	Rangoon.
163	11	20	16	17	40	41	33	24	3.3	3.2	+0.1	96	- 3	830	+ 0.07	5.5	+ 1.0	118	- 7.8	94.60	100.41	-12.91	3.72	Bassein.
12	40	66	32	11	18	82	50	38	7.9	6.4	+1.5	83	+ 3	867	+ 0.38	4.7	- 0.4	121	+ 8.1	100.20	117.81	-8.1	5.52	Diamond Island. (d)
63	50	37	5	109	81	6	4	10	2.5	2.4	+0.1	87	+ 1	775	-0.10	7.5	+ 2.2	122	+ 7.7	97.04	83.28	+13.76	3.90	Toungoo.
274	7	11	21	18	19	10	2	2	1.1	...	...	87	...	810	...	6.7	...	144	...	205.09	175.42	+29.67	10.14	Kyankpyu. (a)
113	45	82	42	30	26	17	2	8	2.8	2.4	+0.4	88	- 1	779	-0.28	6.1	+ 1.1	156	+ 32.2	323.48	196.37	+127.11	10.17	Akyab.
38	11	3	6	185	12	4	7	99	2.9	6.3	-3.4	75	- 1	695	-0.19	4.8	+ 0.9	64	+ 7.7	41.36	35.62	+ 6.33	4.30	Minbu.
...	...	...	...	...	...	...	...	...	...	...	...	79	0	690	-0.11	4.3	+ 0.3	73	+ 10.6	34.98	38.05	-3.07	2.14	Yamethin.
218	2	0	0	53	77	11	1	1	3.3	3.7	-0.4	70	- 5	671	-0.34	5.2	+ 1.6	54	+ 3.7	28.67	33.45	-4.78	2.28	Mandalay. (c)
47	110	9	13	113	24	1	2	46	2.5	...	...	76	- 3	670	-0.35	5.7	+ 1.0	39	- 5.1	28.98	32.27	-5.39	3.83	Mouuya.
153	14	27	19	18	17	78	9	39	11.0	...	...	86	0	551	-0.12	4.9	- 1.4	128	+ 28.2	89.59	62.29	+27.30	3.76	Lashio.
386	7	17	1	0	0	1	0	0	0.7	1.8	-1.1	91	+ 2	675	-0.02	6.7	+ 1.6	116	+ 16.4	82.26	72.72	+ 9.64	3.20	Bhamo. (b)
321	10	18	6	2	3	2	1	2	1.7	...	...	87	+ 1	643	-0.31	5.9	0	113	+ 8.0	90.98	78.91	+12.07	4.30	Myitkyina
II.—Assam.																								
268	5	28	44	8	4	5	1	2	0.5	...	...	89	- 2	659	-0.04	4.9	- 1.0	127	- 7.8	90.26	109.06	- 0.80	3.75	Dibrugarh.
191	36	62	15	8	26	15	5	8	1.2	1.8	-0.6	92	- 2	678	-0.7	7.9	+ 0.6	119	- 10.1	82.36	96.54	-14.18	11.71	Sibsagar.
156	1	92	87	9	4	10	5	1	1.6	...	...	90	+ 1	672	-0.07	3.9	- 1.2	99	- 7.5	113.60	71.08	+ 41.52	4.88	Tezpur.
276	10	28	25	10	1	5	4	5	1.1	...	...	87	- 2	696	+ 0.03	6.7	+ 0.1	90	- 2.8	72.35	66.05	+ 6.30	3.85	Gauhati. (a)
24	1	119	146	20	21	28	4	2	4.5	3.8	+0.7	84	- 3	705	+ 0.04	3.4	- 1.1	87	- 6.9	103.53	95.41	+ 8.12	10.78	Dhubri.
242	4	42	67	7	0	2	1	0	1.6	1.7	-0.2	89	+ 1	720	-0.05	5.2	- 0.4	137	+ 0.4	150.44	126.29	+24.15	4.25	Silchar.
...	...	...	...	...	...	...	...	...	...	...	...	89	+ 2	697	-0.32	3.3	+ 0.3	124	+ 0.3	99.26	102.50	-3.24	4.47	Srimangal.
III.—Bengal.																								
196	5	23	29	74	27	12	0	0	2.7	...	...	87	...	767	...	4.7	...	122	...	225.66	134.29	+91.27	11.48	Cox's Bazar.
150	7	47	61	69	21	8	3	0	2.2	3.6	-1.4	89	+ 3	747	-0.09	5.1	+ 0.4	94	+ 0.4	125.46	101.54	+23.92	9.32	Chittagong.
75	33	49	21	121	35	17	9	5	3.0	...	...	86	- 1	762	-0.13	4.1	+ 0.6	112	- 0.5	123.09	120.84	+ 2.26	5.32	Noskhali.
164	29	22	10	21	80	32	4	3	1.6	2.3	-0.7	84	- 1	781	-0.40	6.1	+ 1.7	110	+ 8.7	97.14	81.59	+15.55	4.70	Barishal.
144	6	8	42	57	51	28	12	17	1.6	3.6	-2.0	83	- 3	789	-0.37	4.9	- 0.4	99	+ 8.0	92.26	72.44	+19.81	9.26	Narayanganj.
265	0	6	44	42	9	5	1	2	1.3	2.0	-0.7	85	- 2	725	-0.13	5.5	+ 0.5	104	- 2.4	100.87	93.83	+ 7.04	4.00	Mymensingh. (a)
208	18	14	66	6	25	14	7	7	1.0	2.2	-1.2	85	+ 2	722	+ 0.06	6.1	+ 1.5	85	+ 0.8	92.23	70.23	+22.03	8.04	Bogra.
68	26	54	111	29	19	23	28	13	2.3	2.6	-0.3	83	0	685	-0.07	3.8	- 0.6	87	+ 7.9	106.23	69.68	+ 36.55	7.80	Dinajpur.
304	11	10	19	6	2	0	1	12	1.2	...	...	89	+ 3	682	-0.03	3.2	- 0.1	111	+ 8.8	137.68	121.11	+16.75	5.95	Jalpaiguri.
8	77	56	16	8	59	69	24	28	7.6	5.9	+1.7	85	0	815	-0.16	5.3	- 0.1	67	- 13.3	50.85	69.58	-18.73	3.02	Saugor Island.

\* Mean of 10 months.

(a) Wind observations of 364 days.

(b) " 363 "

(c) " 363 "

(d) " 363 "

## TABLE

(2) Abstract of observations taken at 8 hrs. at 215

Number of sub-division.	STATION.	PRESSURE, 8 HRS., IN INCHES.										TEMPERATURE OF AIR.									
		Mean 8 hrs. pressure reduced to 32°.					Mean 8 hrs. pressure reduced to sea-level and to constant gravity at 45° Lat.					Lowest pressure of year.					Mean of 8 hrs. dry bulb of year.				
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	
<b>III.—Bengal—concl.</b>																					
	Midnapore	149	29.886	−0.11	29.786	30.018	29.265	76.0	68.9	89.7	−0.3	69.7	−0.8	79.7	−0.5	19.9	105.8	47.3			
	Calcutta	21	29.829	+0.01	29.797	30.171	29.423	74.3	71.0	87.4	+0.6	70.2	−0.3	76.8	+0.1	17.2	101.2	49.7			
	Jessore	30	29.833	+0.10	29.806	30.157	29.448	74.6	70.3	86.5	−1.0	68.6	−1.2	77.5	−1.1	17.9	99.3	43.8			
	Burdwan	90	29.741	−0.09	29.780	30.082	29.335	74.3	69.4	88.0	−0.9	68.8	−1.7	78.4	−1.3	19.1	101.1	46.0			
	Berhampore	67	29.786	+0.04	29.804	30.132	29.402	73.9	69.2	87.0	−0.7	68.8	−0.7	77.9	−0.7	18.3	109.6	46.4			
<b>IV.—Bihar and Orissa.</b>																					
6	Balasore	50	29.801	+0.01	29.797	30.140	29.345	74.8	70.0	89.0	+0.4	69.3	−1.2	79.1	−0.4	19.6	102.6	47.1			
	Hukitala (False Point)	29	29.836	+0.09	29.808	30.152	29.368	...	...	...	...	...	...	...	...	...	...	...	...	...	
	Cuttack	80	29.788	+0.18	29.810	30.109	29.305	75.8	71.7	90.6	−0.6	71.6	−0.7	81.2	−0.7	18.9	104.5	52.2			
	Puri	24	29.848	+0.14	29.813	30.158	29.383	77.2	73.5	86.1	−0.3	74.4	−0.1	80.3	−0.1	11.7	95.1	56.1			
	Angul	455	29.307	+0.07	29.805	29.695	28.959	75.4	69.4	90.4	+0.3	68.8	−0.5	79.6	−0.1	21.6	108.8	45.4			
	Sambalpur	486	29.374	+0.06	29.816	29.676	28.909	74.9	68.4	90.0	−0.8	67.6	−2.1	78.9	−1.5	22.1	109.2	41.2			
7	Chabasa	733	29.102	+0.04	29.800	29.421	28.608	72.6	68.4	89.7	+0.1	66.9	−0.8	78.3	−0.8	22.8	106.5	42.8			
	Ranchi	2,128	27.719	+0.12	29.789	27.993	27.388	70.9	62.0	83.5	−0.9	64.7	−0.8	74.1	−0.9	18.9	101.7	42.7			
	Purulia	816	29.030	+0.14	29.809	29.344	28.659	73.8	68.1	90.3	+0.9	67.3	−1.1	78.8	−0.1	23.1	107.1	45.1			
	Daltonganj	730	29.114	+0.08	29.815	29.447	28.731	71.6*	65.6*	91.4*	+0.7*	64.9*	−2.0*	78.2*	−0.7*	26.5*	110.8	35.7			
8	Purnea	124	29.720	−0.07	29.802	30.083	29.346	70.7	67.3	85.5	−1.1	65.3	−1.0	75.4	−1.1	20.2	97.6	39.2			
	Monghyr	155	29.675	...	29.785	30.046	29.279	73.9	67.3	86.8	...	67.7	...	77.3	...	19.1	102.8	44.9			
	Darbhanga	165	29.681	+0.04	29.805	30.046	29.300	72.9	67.7	85.6	−0.5	65.3	−2.8?	75.4	−1.7?	20.2	98.5	39.6			
	Pusa	188	29.649	...	29.797	30.014	29.273	71.8	67.3	87.5	...	64.6	...	76.1	...	22.9	103.2	39.4			
	Patna	183	29.664	+0.10	29.805	30.096	29.277	74.6	67.1	86.4	−1.2	68.0	−0.6	77.2	−0.9	18.4	103.0	43.3			
	Buxar	239	29.592	+0.01	29.792	29.959	29.168	71.9	65.4	89.3	+0.6	67.0	−1.1	78.2	−0.3	22.4	107.3	42.6			
	Gaya	372	29.475	+0.14	29.809	29.846	29.085	74.1	65.6	89.0	−0.8	68.4	−0.4	78.7	−0.7	20.7	107.9	43.6			
	Naya Dumka	439	29.355	+0.09	29.804	29.694	28.902	74.7	67.2	88.2	+0.6	66.7	−1.2	77.5	−0.3	21.5	103.3	41.4			
<b>V.—United Provinces of Agra and Oudh.</b>																					
9	Gorakhpur	257	29.572	+0.03	29.793	29.912	29.168	71.2	65.8	87.3	−0.5	65.4	−1.6	76.3	−1.1	21.9	108.3	40.8			
	Benares	267	29.572	+0.09	29.797	29.931	29.180	74.3	66.4	89.7	+0.1	65.2	−1.5	77.5	−0.7	24.6	109.6	36.8			
	Allahabad	309	29.545	+0.03	29.816	29.897	29.156	74.1	64.9	91.1	+0.9	68.3	−0.5	78.7	+0.2	24.9	112.7	40.1			
	Cawnpore	416	29.426	+0.19	29.807	29.773	29.028	72.9	64.0	91.3	+1.3	67.1	+0.4	79.3	+0.8	24.2	113.0	41.5			
	Lucknow	368	29.470	+0.14	29.800	29.826	29.054	71.6†	60.3†	89.9†	0†	61.9†	+0.7†	75.9†	+0.8†	26.0†	111.3	40.5			
	Bahraich	407	29.416	+0.04	29.792	29.748	29.010	71.3	64.7	88.4	+0.1	64.9	−0.8	76.7	−0.3	23.6	104.2	38.4			
10	Jhansi	824	29.026	+0.02	29.818	29.357	28.652	74.7	63.6	92.7	+1.5	68.9	−2.6?	79.8	−0.5?	25.8	114.6	39.6			
	Agra	556	29.283	+0.08	29.805	29.635	28.650	76.4	64.4	92.1	+1.7	68.0	+0.2	80.0	+0.9	24.1	112.7	41.0			
	Mainpuri	516	29.317	+0.11	29.802	29.650	28.888	73.1	62.0	92.8	+2.7	65.9	+0.4	79.3	+1.5	26.9	114.0	39.8			
	Bareilly	568	29.247	+0.08	29.780	29.601	28.814	71.3	64.5	89.0	+1.4	64.4	−0.3	76.7	+0.5	24.6	110.3	38.0			
	Roorkee	899	28.917	+0.07	29.806	29.235	28.470	68.2	61.3	88.6	−0.1	61.1	−1.2	73.0	−0.7	26.6	110.4	35.7			

N. B.—Elevations in italics indicate barometrical determinations.

\* Mean of 11 months.  
† " 5 "

B—contd.

stations in India, etc., in the year 1918.

WIND DIRECTION.										WIND VELOCITY.			HYGROMETRY, 8 HRS.			CLOUD.		RAINFALL.					STATION.	
Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Mean velocity in miles per hour of year.	Normal velocity of year.	Departure from normal of year.	Mean humidity at 8 hrs. of year.	Departure from normal of year.	Mean vapour tension at 8 hrs. in inches of mercury of year.	Departure from normal of year.	Mean cloud amount at 8 hrs. of year.	Departure from normal of year.	Number of rainy days during year.	Departure from normal of year.	Rainfall of year.	Normal rainfall of year.	Departure from normal of year.	Highest rainfall during year.	
20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44
260	26	13	9	12	23	7	3	12	2·4	...	...	68	-8	·618	-·064	4·2	+1·4	70	-10·2	55·82	58·42	-2·60	4·56	III.—Bengal—contd.
33	28	15	26	34	43	99	26	61	3·3	3·2	+0·1	84	+1	·750	-·020	4·6	+0·1	80	-5·1	58·37	61·82	-3·45	4·23	Midnapore,
315	3	1	5	26	6	6	1	2	0·9	2·2	-1·3	80	-5	·425	-·057	4·1	-0·5	85	-3·8	67·98	68·17	+1·81	4·26	Caleutta,
217	23	19	5	14	21	27	14	25	1·0	2·3	-1·3	77	-1	·691	-·025	4·7	+0·1	84	+7·2	68·20	57·84	+10·42	3·51	Jessore,
140	16	11	43	35	51	44	17	8	2·0	2·4	-0·4	78	-5	·687	-·047	4·0	-0·7	75	-1·0	72·15	56·10	+16·05	5·94	Burdwan,
69	66	23	4	0	68	73	8	54	2·6	3·5	-0·9	77	-4	·704	-·046	4·5	+1·2	70	-7·4	49·78	62·00	-12·31	4·20	Balasore,
21	80	20	1	2	39	106	46	51	7·0	...	...	...	...	...	54	0	57	-15·0	38·38	62·02	-26·54	2·48	Hukitala (False Point.)	
235	2	5	4	2	9	60	42	6	1·7	2·0	-0·3	81	+2	·745	-·004	4·9	+0·6	62	-12·1	38·23	59·30	-21·07	3·06	Cuttack,
29	111	43	3	2	34	91	33	19	9·4	...	...	83	0	·797	-·026	4·6	+0·7	61	+0·7	54·54	54·00	+0·54	11·87	Puri,
114	10	19	6	20	7	4	48	137	3·8	...	...	73	-4	·668	-·022	4·7	+1·3	50	-22·0	39·81	47·04	-7·23	3·50	Angul,
1	97	55	23	1	22	99	17	50	2·9	2·6	+0·3	71	+1	·632	-·019	4·4	+0·5	60	-14·9	69·31	64·72	+4·59	15·52	Sambalpur,
202	4	11	2	3	20	106	14	3	1·9	1·3	+0·6	74	-3	·607	-·034	4·1	+0·7	55	-10·0	35·74	52·11	-16·37	3·72	Chaitasa,
52	17	17	15	21	21	36	97	89	3·7	4·6	-0·9	63	-3	·503	-·028	4·1	+0·3	60	-11·4	42·98	56·20	-13·22	2·58	Ranchi,
98	4	14	10	27	7	26	106	74	1·8	...	...	65	-8	·579	-·051	4·8	+1·6	60	-16·1	40·58	52·51	-11·93	2·79	Furulia,
245	4	11	13	20	5	35	13	3	2·3†	...	...	73†	+1	·591†	+·003	2·3	-0·4	53	-9·5	44·17	41·91	+2·26	2·02	Daltonganj. *
32	13	53	96	38	15	55	46	17	2·5	2·3	+0·2	83	-2	·668	-·021	4·9	+1·5	72	+1·0	80·96	61·72	+19·24	9·42	Purnea,
38	4	16	77	57	5	94	62	12	4·4	...	...	69	...	·623	...	3·2	...	52	...	63·58	50·00	+12·50	5·85	Monghyr,
229	0	16	80	3	5	10	11	2	2·9	2·9	0	75	-6	·648	-·036	3·9	+0·8	56	-3·3	51·03	51·09	+0·84	6·24	Darbhanga,
71	6	38	95	52	10	46	41	5	2·9	...	...	70	...	·659	...	3·5	...	55	...	60·72	49·13	+11·50	5·16	Pusa,
113	3	3	113	13	15	32	68	5	3·4	2·7	+0·7	66	-6	·611	-·045	3·4	-0·1	47	-9·1	77·14	47·98	+29·16	14·41	Patna,
54	4	17	76	22	11	98	75	8	3·6	...	...	68	0	·583	-·025	3·5	+0·2	46	-7·3	27·04	41·09	-13·45	3·50	Buxar,
136	6	21	21	28	35	92	18	7	2·3	2·7	-0·4	62	-9	·559	-·084	2·9	-0·5	57	-0·9	52·17	46·48	+5·69	4·92	Gaya,
303	2	3	14	16	10	8	1	8	1·4	...	...	67	-6	·614	-·035	3·1	-0·2	69	-8·8	51·29	56·21	-4·02	5·83	Naya Dumka.
																							V.—United Provinces of Agra and Oudh.	
82	14	2	166	2	3	6	87	3	2·2	1·7	+0·5	74	-1	·612	-·032	1·6	-1·4	40	-17·3	34·04	50·58	-15·64	3·93	Gorakhpur,
91	5	22	27	38	10	96	49	28	2·3	2·7	-0·4	65	-7	·583	-·029	2·8	-0·5	52	0	30·41	40·18	-9·77	4·11	Benares,
136	3	19	45	3	4	24	111	20	2·7	3·8	-1·1	59	-7	·538	-·044	3·6	+0·1	35	-13·8	25·58	38·80	-13·22	4·25	Allahabad,
83	20	10	33	43	13	29	82	63	2·3	2·7	-0·4	61	-10	·527	-·042	1·2	-1·3	28	-16·4	16·56	35·90	-10·34	2·90	Cawnpore,
239	3	2	44	6	7	10	49	5	1·4	2·2	-0·8	51†	-6†	·414†	+·013†	2·5	-0·7	35	-12·7	27·05	38·53	-10·58	3·04	Lucknow.
169	17	1	53	26	8	9	30	22	2·0	2·3	-0·3	68	-7	·569	-·066	2·5	+0·1	39	-11·6	37·02	45·32	-8·30	4·18	Bahrach.
77	18	13	7	9	4	133	81	28	3·6	2·4	+1·2	53	-5	·476	-·068	1·3	-0·8	25	-22·7	15·66	36·95	-20·29	1·48	Jhansi,
117	14	15	21	15	18	71	61	33	2·9	3·3	-0·4	50	-10	·489	-·036	2·0	-0·7	17	-20·9	19·03	26·69	-13·66	2·04	Agra.
101	20	12	38	30	11	13	75	65	1·6	1·4	+0·2	55	-10	·485	-·060	2·5	-0·7	22	-16·1	11·79	27·90	-15·51	1·75	Mainpuri,
217	6	6	38	25	5	5	49	19	1·1	2·0	-0·9	68	-4	·566	-·009	3·0	+0·1	30	-17·8	19·37	44·41	-25·04	3·00	Bareilly,
250	1	4	4	70	2	1	0	33	2·2	1·8	+0·4	68	-3	·503	-·012	1·8	-1·0	36	-11·6	26·51	42·38	-18·82	3·47	Roorkie.

\* Wind observations for 349 days.

† Mean of 11 months.

‡ " " 5 "

(2) Abstract of observations taken at 8 hrs. at 215

Number of sub-division.	STATION.	Height of barometer above sea-level in feet.	PRESSURE, 8 HRS., IN INCHES.							TEMPERATURE OF AIR.										
			Mean 8 hrs. pressure reduced to 32°.	Departure from normal of year.	Mean 8 hrs. pressure reduced to sea-level and to constant gravity at 45° Lat.	Highest pressure of year.	Lowest pressure of year.	Mean of 8 hrs. dry bulb of year.	Mean of 8 hrs. wet bulb of year.	Mean maximum of year.	Departure from normal of year.	Mean minimum of year.	Departure from normal of year.	Yearly mean of mean between maximum and minimum.	Departure from normal of year.	Mean daily range of temperature.	Highest temperature observed during year.	Lowest temperature observed during year.		
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
VI.—Punjab.																				
11	Delhi	718	29.111	+·011	29.800	29.440	28.661	71·9	61·7	89·7	+1·0	68·0	+0·5	78·0	+0·7	21·7	111·0	40·1		
	Hisar	725	29.109	+·022	29.816	29.470	28.659	71·3	61·1	92·1	+0·7	63·1	-1·0	77·6	-0·1	20·0	115·0	32·9		
	Patiala	818	28.983	-·012?	29.787	29.331	28.534	70·4	62·3	88·5	+1·4	63·9	+0·4	76·2	+0·9	24·0	111·4	37·4		
	Ambala	892	28.915	+·001	29.795	29.256	28.461	70·3	61·2	100·4	+2·8?	63·1	+0·4	76·8	+1·6?	27·3	115·7	35·1		
	Ludhiana	812	28.997	+·004	29.797	29.349	28.539	69·6	60·8	89·0	+1·1	64·5	+0·6	76·8	+0·9	24·5	114·1	38·6		
	Lahore	702	29.100	-·001	29.793	29.476	28.607	69·1	61·1	89·6	-0·6	62·8	+1·1	76·2	+0·3	26·8	115·8	34·7		
	Sialkot	830	28.973	-·002	29.798	29.339	28.472	68·6	61·9	86·8	-0·7	60·9	-1·0	73·0	-1·3	25·8	111·8	34·5		
	Rawalpindi	1,074	28.147	-·001	29.825	28.502	27.674	68·3	59·1	84·8	+0·7	57·5	-0·2	71·2	+0·3	27·3	112·6	30·3		
12	Khushab	612	29.204	+·002	29.802	29.601	28.682	71·8	60·7	90·2	+0·5	63·3	-0·6	76·8	-0·1	26·9	115·2	32·2		
	Lyallpur	605	29.198		29.788	29.591	28.677	70·3	61·0	89·6		62·1		75·8		27·6	114·9	32·3		
	Montgomery	558	29.250	+·001	29.791	29.647	28.737	71·9	61·7	90·6	-1·0	63·7	-0·5	77·1	-0·7	26·8	114·8	35·2		
	Multan	426	29.386	+·001	29.787	29.830	28.856	72·4	63·7	91·2	-0·7	66·6	+1·0	78·0	+0·1	24·6	114·7	37·0		
VII.—North-West Frontier Province.																				
14	Peshawar	1,113	28.718	-·010	29.829	29.097	28.189	66·9	58·5	87·1	+1·8	58·9	-0·4	73·0	+0·7	28·2	120·6	30·0		
	Dera Ismail Khan	590	29.235	-·004	29.805	29.650	28.680	70·0	60·9	90·4	+0·4	63·3	+0·9	76·9	+0·7	27·1	116·6	32·9		
VIII.—Sind.																				
16	Jacobabad	186	29.643	+·013	29.793	30.081	29.098	73·7	63·5	90·1	+0·5	65·6	+0·1	80·9	+0·3	30·5	123·3	31·6		
	Hyderabad	96	29.751	+·010	29.801	30·178	29.283	73·2	65·1	92·7	-0·7	67·2	-1·0	80·0	-0·9	25·6	114·4	30·0		
	Karachi	13	29.676	+·022	29.839	30·247	29.462	74·1	68·3	88·2	-0·9	70·8	-0·4	77·0	-0·7	12·5	97·5	48·4		
IX.—Rajputana.																				
17	Bikaner	771	29.073	+·024	29.824	29.439	28.650	72·5	62·7	93·6	+1·6	66·2	-3·1?	79·8	-0·7?	27·3	116·4	36·9		
	Jodhpur	780	29.084	+·019	29.837	29.416	28.692	73·0	61·0	92·7	+0·1	66·8	-1·0	79·7	-0·6	25·9	112·5	36·8		
18	Jaipur	1,431	28.434	+·015	29.837	28·746	28.063	73·5	61·2	91·5	+0·6	65·5	-0·2	78·5	+0·2	26·0	114·0	36·2		
	Ajmer	1,611	28.258	+·010	29.846	28·662	27·898	69·4	58·8	89·5	-0·3	64·9	-0·1	76·7	-0·2	23·6	107·8	33·7		
	Kotah	832	29.024	+·012	29.819	29·381	28·655	77·8	64·1	92·8	+0·5	69·2a	-0·9a	80·7a	-0·2a	23·1a	113·8	43·8		
X.—Bombay.																				
19	Deesa	466	29.426	+·024	29.855	29·710	29·070	74·2	64·7	94·6	+0·5	68·2	-0·8	80·5	-0·1	28·4	116·1	40·9		
	Bluj	334	29.550	+·015	29.840	29·889	29·192	75·7	66·7	90·7	-0·5	66·3	-2·3	78·5	-1·4	24·4	107·8	39·3		
	Jamnagar	61	29.839	+·009	29.847	30·146	29·493	75·7	68·1	89·7	+0·1	67·3	-1·0	78·5	-0·5	22·4	103·9	42·5		
	Dwarka	37	29.870	+·010	29·843a	30·158	29·519	76·4	70·9	84·6	+0·5	72·7	+0·2	78·6	+0·3	11·9	94·6	53·1		
	Rajkot	429	29.455	+·002	29.839	29·708	29·132	74·0	64·8	93·6	+0·6	64·8	-1·2	79·2	-0·3	28·9	106·1	38·5		
	Veraval	18	29.881	+·006	29.842	30·122	29·564	75·7	65·5	85·0	+0·1	71·7	+0·7	78·3	+0·4	13·3	100·3	51·5		
	Bhavnagar Para.	55	29.842	+·005	29·843	30·112	29·514	76·0	68·5	94·2	+0·6	68·5	-0·8	81·4	-0·1	25·7	110·0	49·0		
	Surat	89	29.888	+·010	29.860	30·107	29·683	77·1	68·8	92·1	+0·5	70·4	+0·7	81·2	+0·6	21·7	106·9	50·3		
	Ahmadabad	163	29.742	+·020	29·856	30·027	29·406	77·6	66·5	96·0	+1·6	70·1	-0·6	83·1	+0·5	26·0	112·8	61·3		
25	Bombay	97	29.876	+·003	29·854	30·079	29·317	77·7	72·6	86·0	+0·9	75·4	+0·5	81·1	+0·7	11·5	93·6	63·9		
	Ratnagiri	207	29.703	+·002	29·861	29·883	29·469	80·2	72·1	87·3	0	74·1	+1·0	80·7	+0·5	13·2	99·5	63·9		

N.B.—Elevations in italics indicate barometrical determinations.

a Mean of 11 months.

## B.—contd.

stations in India, etc., in the year 1918.

WIND DIRECTION.										WIND VELOCITY.			HYGROMETRY, 8 HRS.			CLOUD.			RAINFALL.			STATION.		
Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Mean velocity in miles per hour of year.	Normal velocity of year.	Departure from normal of year.	Mean humidity at 8 hrs. of year.	Departure from normal of year.	Mean vapour tension at 8 hrs. in inches of mercury of year.	Departure from normal of year.	Mean cloud amount at 8 hrs. of year.	Departure from normal of year.	Number of rainy days during year.	Departure from normal of year.	Rainfall of year.	Normal rainfall of year.	Departure from normal of year.	Heaviest rainfall during year.	
20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44
44	19	15	20	49	8	7	113	90	3·7	2·5	+1·2	54	-5	-032	1·2	-2·0?	20	-17·1	12·33	27·38	-15·05	2·15	Delhi.	VI.—Punjab.
24	21	16	33	36	29	92	83	20	4·5	3·5	+1·0	55	-5	-046	2·1	-0·5	9	-14·2	7·85	14·02	-6·17	2·00	Hissar.	
31	30	31	38	81	8	5	59	73	4·4	64	-3	510	-032	2·4	-0·3	21	-15·5	17·33	25·59	-8·26	2·80	Patiala.		
72	76	7	73	58	4	4	21	50	3·7	1·5	+2·2	60	-12?	-063	2·4	-0·4	27	-15·3	13·69	30·63	-16·04	3·50	Ambala.	
240	7	14	3	42	15	7	12	17	1·4	1·4	0	60	-5	-041	1·3	-1·7	22	-14·7	18·45	28·68	-12·13	4·28	Ludhiana. (b)	
161	14	20	18	49	18	16	37	32	1·5	1·8	-0·3	65	-2	-024	1·8	-0·8	27	-0·7	11·50	19·58	-8·08	1·87	Lahore.	
124	30	49	77	36	3	6	14	20	1·5*	1·5	0	70	+4	+008	2·1	-0·2	30	-10·4	21·67	30·69	-9·02	3·43	Sialkot.	
140	26	30	24	32	18	22	48	25	2·2	1·6	+0·6	61	-4	-005	3·1	-0·1	41	-7·0	31·94	34·06	-2·12	3·37	Rawalpindi.	
160	14	65	68	20	22	9	4	2	3·5	3·6	-0·1	53	-2	-018	2·3	+0·2	22	-1·2	9·37	14·85	-5·48	1·06	Khushab. (a)	
78	5	40	27	44	40	73	16	41	2·3	61		462		2·3		18	-1·5	8·27	13·13	-3·86	2·66	Lyallpur (a).		
64	22	23	26	44	72	64	24	26	4·0	4·3	-0·3	56	+4	+010	1·6	-0·5	11	-7·2	6·78	10·47	-3·71	1·80	Montgomery.	
181	57	22	0	33	42	29	0	1	1·1	1·5	-0·4	61	+2	+022	1·6	0	8	-4·2	4·47	6·92	-2·45	1·13	Multan.	
304	21	1	0	2	25	5	1	6	0·7	2·4	-1·7	62	-1	-011	2·3	-0·7	21	-4·1	10·58	13·42	-2·84	1·29	Peshawar.	VII.—North-West Frontier Province.
273	11	33	5	14	3	3	2	21	1·5	1·3	+0·2	61	-4	-044	1·5	-0·5	16	-1·5	5·13	9·32	-4·19	1·02	Dera Ismail Khan.	
169	1	12	8	126	6	20	0	23	2·1	2·5	-0·4	55	-3	-025	1·0	-0·8	4	-3·6	1·26	3·59	-2·33	0·50	Jacobabad.	VIII.—Sind.
45	97	4	1	0	82	116	16	4	6·7	8·1	-1·4	62	+4	+008	0·8	-2·0?	7	-2·6	1·74	7·13	-5·39	0·87	Hyderabad.	
22	38	70	11	2	3	73	118	19	6·4	9·2	+0·2	72	-1	-028	3·9	+0·4	6	-3·2	2·04	7·64	-5·60	0·55	Karachi.	
53	7	12	41	46	63	107	34	3	6·1	4·3	+0·8	55	+2	-089	-011	1·4	-1·0	6	-13·4	2·07	11·09	-9·02	0·74	Bikaner.
64	7	119	6	2	12	141	12	2	4·0	46	-3	417	-034	3·1	0	3	-15·5	1·49	12·63	-11·14	1·17	Jodhpur.	IX.—Rajputana.	
75	31	34	25	14	1	17	95	73	3·6	3·2	+0·4	47	-8	-018	-062	2·4	-0·7	13	-22·5	8·82	23·63	-14·81	1·78	Jaipur.
183	2	9	4	3	0	48	97	19	3·8	3·6	0	56	-7	-035	-071	1·7	-1·1	11	-19·1	5·88	20·21	-14·33	1·20	Ajmer.
158	7	14	4	9	0	61	59	52	2·5	45	-5	445	-026	2·6	+0·4	22	-13·0	15·30	26·51	-11·21	2·90	Kotah.		
32	10	68	63	12	5	94	48	33	7·1	7·5	-0·4	57	+1	-024	+001	3·2	0	11	-17·3	15·51	23·57	-8·06	5·10	Deesa.
120	28	1	7	0	6	18	184	1	6·6	8·1	-1·5	60	-7	-067	-064	2·3	-0·2	5	-11·9	2·92	14·36	-11·44	1·90	Bhuj.
22	4	37	51	4	11	108	102	26	8·8	56	-11	618	-024	2·1	0	5	-15·8	3·36	18·53	-15·17	1·12	Jamnagar.	X.—Bombay.	
3	60	39	7	1	9	93	83	42	9·8	75	-2	700	-049	3·2	-0·1	2	-14·9	1·03	14·50	-13·47	0·37	Dwarka. (e)		
34	39	42	16	3	18	103	77	33	8·2	6·8	+1·6	55	-11	-013	-096	4·0	+1·1	9	-21·9	1·967	26·06	-16·39	4·40	Rajkot.
37	94	39	3	8	15	54	60	46	7·7	8·1	+1·6	67	-4	-024	-045	3·1	-0·4	9	-15·2	6·10	18·28	-12·18	3·45	Veraval.
20	20	18	3	5	9	92	86	116	4·6	7·3	-2·7	66	+37	+034?	+034?	3·3	+0·1	11	-18·8	6·54	22·40	-15·86	1·07	Bhavnagar Para. (e)
89	40	39	30	32	44	47	21	22	3·8	5·5	-2·3	64	-6	-031	-041	3·9	+0·6	25	-21·1	10·31	40·98	-24·67	2·74	Surat. (e)
37	10	94	21	4	2	85	32	80	4·2	3·6	+0·6	53	-6	-035	-036	2·6	-0·9	15	-19·1	8·43	20·15	-20·72	1·71	Ahmadabad.
3	38	66	81	44	16	36	63	16	6·4	8·6	-2·2	77	-1	-020	4·1	-0·2	46	-27·3	35·54	71·15	-35·61	5·34	Bombay.	
28	45	28	56	62	27	43	49	27	6·7	6·2	+0·5	66	-7	-033	3·6	-0·3	75	-17·7	67·78	100·32	-32·54	4·81	Ratnagiri.	

\* Mean of 11 months.  
 (a) Wind observations of 364 days.  
 (b) " " " 357 "  
 (c) " " " 337 "

(2) Abstract of observations taken at 8 hrs. at 215

Number of sub-division.	STATION.	Height of barometer above sea-level in feet.	PRESSURE, 8 HRS., IN INCHES.								TEMPERATURE OF AIR.																																	
			Mean 8 hrs. pressure reduced to 32°.				Departure from normal of year.				Mean 8 hrs. pressure reduced to sea-level and to constant gravity at 45° Lat.				Highest pressure of year.				Lowest pressure of year.				Mean of 8 hrs. dry bulb of year.		Mean of 8 hrs. wet bulb of year.		Mean maximum of year.		Departure from normal of year.		Mean minimum of year.		Departure from normal of year.		Yearly mean of mean between maximum and minimum.		Departure from normal of year.		Mean daily range of temperature.		Highest temperature observed during year.		Lowest temperature observed during year.	
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28														
<b>X.—Bombay—concl.</b>																																												
26	Marmagao	60	29.863	0	29.858	30.029	29.654	78.3	74.9	85.7	-0.2	74.4*	-0.7*	80.8*	-0.7*	12.2*	94.2	65.7																										
	Karwar	44	29.889	+.010	29.868	30.051	29.684	75.7	73.0	87.1	+1.0	72.8	+0.1	79.9	+0.5	14.3	96.1	59.8																										
	Malegaon	1,430	28.473	+.016	29.858	28.692	28.189	74.0	62.8	93.9	+2.0	65.0	-0.1	79.4	+0.9	28.9	109.7	42.9																										
	Ahmadnagar	2,164	27.768	+.007	29.846	27.952	27.526	73.9	62.5	90.5	+1.1	64.1	+0.3	77.2	+0.7	26.4	105.4	43.6																										
	Poona	1,846	28.064	+.001	29.859	28.254	27.820	72.3	64.3	90.2	+0.7	64.5	-0.1	77.4	+0.3	25.7	104.6	45.9																										
	Sholapur	1,590	28.312	+.003	29.840	28.501	28.094	76.4	64.7	92.8	+0.4	68.6	+0.5	80.7	+0.5	24.2	108.1	51.7																										
	Bijapur	1,948	27.975	+.017	29.850	28.164	27.771	75.3	65.7	90.5	-0.2	68.0	+0.4	79.3	+0.1	22.5	105.5	40.2																										
	Belgaum	2,562	27.397	+.020	29.879	27.552	27.216	70.4	64.7	84.5	0	63.7	-0.2	74.1	-0.1	20.8	100.6	50.9																										
<b>XI.—Central India.</b>																																												
20	Neemuch	1,626	28.263	+.016	29.848	28.552	27.935	73.2	61.9	89.1	+0.2	64.1	-0.4	76.6	-0.1	25.0	109.7	38.8																										
	Indore	1,823	29.067	+.012	29.841	28.325	27.768	73.8	65.1	89.6	+1.5	63.7	0	76.7	+0.7	25.9	110.3	40.9																										
21	Nowrang	754	29.080	+.006	29.816	29.420	28.731	71.0	61.7	91.1	+1.7	64.9	-0.8	78.0	+0.5	26.3	112.5	36.0																										
	Sutna	1,041	28.805	+.019	29.817	29.111	28.454	72.6	63.4	88.5	+0.3	65.3	-0.6	76.9	-0.1	23.2	110.3	36.6																										
<b>XII.—Central Provinces.</b>																																												
22	Bul	2,134																																										
	Akola	925	28.965	+.016	29.846	29.210	28.678	76.7	64.7	94.5	+1.5	67.8	+0.6	81.1	+1.1	26.7	113.3	42.7																										
	Amravati	1,215	28.666	+.013	29.832	28.939	28.377	77.4	63.9	92.7	+0.6	60.8	+0.8	81.3	+0.7	22.9	111.6	51.3																										
23	Khandwa	1,044	28.843	+.017	29.851	29.004	28.552	73.9	63.4	93.1	+1.1	66.9	-0.1	80.0	+0.5	26.3	111.4	41.8																										
	Hoshangabad	1,006	28.878	+.010	29.849	29.157	28.561	73.2	64.1	90.9	+0.5	65.9	-1.0	78.4	-0.3	25.1	111.7	40.8																										
	Saugor	1,807	28.051	-.002?	29.811	28.309	27.718	73.0	60.8	89.1	+1.2	68.8	+0.3	77.9	+0.7	22.3	111.0	44.4																										
	Jubbulpore	1,327	28.524	+.008	29.821	28.817	28.177	70.8	62.0	88.0	-0.5	64.1	-0.3	76.0	-0.4	23.9	108.3	37.1																										
	Seoni	2,033	27.852	+.021	29.820	28.118	27.524	73.3	62.0	80.7	-1.2	64.5	-0.2	76.6	-0.7	22.2	106.4	41.4																										
	Nagpur	1,017	28.860	+.021	29.835	29.123	28.520	75.5	64.7	91.8	-0.3	67.7	-1.1	79.8	-0.7	24.0	112.0	45.6																										
24	Pendra	2,040	27.833	+.023	29.818	28.109	27.455	72.4	62.7	85.9	+0.4	64.1	-0.8	75.0	-0.3	21.8	106.5	39.1																										
	Raipur	970	28.885	+.007	29.813	29.160	28.488	75.1	66.0	89.8	-0.5	67.9	-0.8	78.9	-0.7	21.8	109.5	45.7																										
	Chanda	634	29.239	0	29.826	29.405	28.940	76.3	67.7	92.7	-0.2	67.9	-0.7	80.3	-0.5	24.8	112.5	42.0																										
	Jagdalpur	1,913	28.063		29.821	28.299	27.740	72.3	66.7	87.1		64.9		76.0		22.3	102.4	43.2																										
<b>XIII.—Hyderabad.</b>																																												
27	Aurangabad	1,905	28.011	+.006	29.840	28.214	27.761	75.7	63.3	91.2	+0.4	67.3	+1.7	79.2	+1.1	22.8	107.1	46.1																										
	Nizamabad	1,248	28.640		29.834	28.869	28.380	76.0	66.6	93.1	+1.5	68.1	-0.3	80.7	+0.6	25.0	111.4	41.7																										
	Bidar	2,165																																										
28	Gulbarga	1,503	28.400	+.006	29.845	28.618	28.172	75.6	66.3	93.7	+1.1	68.9	-0.1	81.3	+0.5	24.8	109.5	49.0																										
	Raichur	1,311	28.601	+.026	29.853	28.800	28.378	77.5	69.1	92.8	+0.5	71.8	+0.1	82.4	+0.8	21.0	107.0	55.9																										
	Hyderabad (Deccan)	1,738	28.194	+.023	29.849	28.411	27.964	75.5	67.7	89.9	-0.6	69.6	+0.1	79.8	-0.3	20.9	105.7	51.2																										
	Hanamkonda	877	29.016	+.019	29.840	29.267	28.738	78.0	69.6	91.7	-0.1	72.2	+0.4	81.9	+0.1	19.5	106.2	55.0																										

N. B.—Elevations in italics indicate barometrical determinations.

\* Mean of 5 months.

† .. .. 11 ..

## ANNUAL SUMMARY, 1918.

B—contd.

stations in India, etc., in the year 1918.

WIND DIRECTION.										WIND VELOCITY.			HYGROMETRY, 8 HRS.			CLOUD.			RAINFALL.			STATION.				
Number of winds from																										
Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.		Mean velocity in miles per hour of year.	Normal velocity of year.	Mean humidity at 8 hrs. of year.	Departure from normal of year.	Mean vapour tension at 8 hrs. in inches of mercury of year.	Departure from normal of year.	Mean cloud amount at 8 hrs. of year.	Departure from normal of year.	Number of rainy days during year.	Departure from normal of year.	Rainfall of year.	Normal rainfall of year.	Departure from normal of year.	Heaviest rainfall during year.			
20	21	22	23	24	25	26	27	28		29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	X.—Bombay—concl'd.
49	33	70	62	25	20	44	27	35	5'3	6'7	-1'4	85	+ 2	'848	+ '005	5'6	+ 1'3	87	- 7'3	92'25	93'84	- 1'59	12'11	Marmagao.		
242	55	7	0	4	35	13	0	9	2'1	3'0	-0'9	87	+ 4	'785	+ '038	3'7	-0'1	102	- 1'7	90'40	120'63	- 21'14	6'80	Karwar.		
51	12	4	5	8	16	159	83	27	6'2	6'5	-0'3	48	-10	'437	- '070	3'5	+ 0'5	20	- 15'0	8'74	22'58	- 13'84	0'94	Malegon.		
109	25	9	3	22	19	23	68	89	5'3	8'3	-3'0	52	-10	'412	- '083	2'5	-0'5	26	- 9'8	14'23	22'33	- 8'10	1'80	Ahmadnagar.		
156	6	10	16	8	1	20	102	35	6'9	7'6	-0'7	63	0	'500	+ '006	2'4	-1'3	29	- 17'8	10'57	27'25	- 10'68	1'28	Poona. (a)		
29	14	36	25	76	7	45	42	89	8'0	7'1	+ 0'9	53	-2	'476	- '020	4'3	+ 0'3	33	- 9'1	15'41	28'52	- 13'11	1'97	Sholapur.		
22	43	23	22	36	45	43	72	50	5'3	4'7	+ 0'6	60	- 7	'518	- '061	3'1	-0'6	19	- 17'5	9'58	20'50	- 10'93	1'16	Bijapur.		
172	10	11	46	17	1	47	58	3	5'0	11'0	-6'0	73	+ 3	'545	+ '008	5'2	+ 0'8	49	- 32'0	20'91	50'86	- 20'95	2'97	Belgaum.		
																								XI.—Central India.		
109	15	12	55	5	6	20	142	1	6'2	6'4	-0'2	52	- 6	'444	- '055	2'5	-0'3	21	- 14'4	19'23	28'03	- 8'80	2'83	Neemuch.		
129	13	29	15	17	7	7	95	54	3'5	3'0	+ 0'5	62	0	'637	+ '015	3'3	-0'3	24	- 20'9	10'57	32'34	- 15'77	1'95	Indore.		
80	14	20	17	15	10	57	93	59	2'4	1'9	+ 0'5	58	- 7	'460	- '070	3'8	+ 0'1	29	- 19'3	18'58	42'68	- 29'28	1'28	Newgong.		
135	9	6	25	11	36	73	67	3	2'7	4'4	-1'7	60	- 1	'509	- '007	2'3	-1'4	41	- 13'9	29'26	44'34	- 15'08	2'90	Sutna.		
																								XII.—Central Provinces.		
7	7	11	52	44	9	31	113	91	5'8	5'7	+ 0'1	63		'482		4'2		34	- 18'3	24'27	34'02	- 10'35	2'00	Buldana.		
50	3	22	58	18	14	21	102	77	5'1	4'4	+ 0'7	50	- 7	'470	- '040	4'6	+ 1'0	26	- 20'2	14'92	31'99	- 17'07	2'61	Akola.		
98	6	50	40	12	2	12	92	58	5'0	4'2	+ 0'8	47	- 11	'441	- '088	3'2	-0'3	36	- 11'8	22'60	33'47	- 10'87	3'01	Amraoti.		
41	16	36	33	19	12	18	124	66	5'5	4'4	+ 1'1	54	- 3	'480	- '025	3'5	+ 0'4	21	- 20'0	13'46	29'54	- 16'08	2'07	Khandwa.		
154	1	49	2	22	0	76	8	53	2'0	2'3	-0'3	60	- 4	'506	- '035	3'5	+ 0'1	35	- 20'6	28'60	48'27	- 19'67	4'45	Hoshangabad.		
42	13	40	24	34	13	27	106	66	5'1	3'2	+ 1'9	48	- 8	'409	- '067	2'8	-0'3	42	- 14'3	32'49	44'76	- 12'27	5'05	Saugor.		
73	6	9	19	55	37	59	68	39	2'0	2'3	-0'3	61	- 6	'479	- '045	2'9	-0'4	45	- 19'1	39'27	55'01	- 15'74	4'15	Jubbulpore.		
179	39	27	5	4	10	18	48	36	2'0	2'7	-0'7	52	- 10	'436	- '071	3'4	+ 0'2	54	- 16'4	40'31	52'48	- 6'15	9'62	Seoni.		
22	59	64	43	4	3	18	58	93	4'0	4'1	-0'1	55	- 4	'587	- '048	2'7	-1'1	54	- 8'9	32'60	49'16	- 16'56	2'60	Nagpur. (b)		
112	46	16	7	12	30	33	27	82	4'3			59	- 1	'479	- '001	2'3	-1'1	61	- 13'4	38'93	49'19	- 10'26	2'84	Pendra.		
51	19	50	44	8	12	111	56	14	3'0	4'3	-1'3	61	- 2	'537	- '023	3'4	-0'4	62	- 1'5	65'32	50'02	+ 15'30	6'11	Raipur.		
23	41	57	34	28	9	54	69	50	3'6	2'7	+ 0'9	64	0	'588	+ '002	4'1	+ 0'5	43	- 20'7	38'50	52'68	- 14'18	3'88	Chanda.		
183	12	4	15	4	36	30	79	2	2'3			75		'603		4'1		63		60'40	61'33	- 0'93	3'60	Jagdalpur.		
																								XIII.—Hyderabad.		
36	22	29	76	36	3	23	98	43	8'5			50	- 4	'443	- '043	8'0	+ 1'7	33	- 11'3	14'65	27'79	- 13'19	2'10	Aurangabad.		
140	16	24	17	6	25	52	64	21	2'8			58	- 8	'529	- '087	3'6	+ 0'1	44	- 10'9	26'66	40'88	- 14'27	2'52	Nizamabad.		
0	11	35	12	46	6	116	31	77	3'7*			65	- 2	'583	- '015	2'6*	-0'1	50	- 3'7	35'50	36'82	- 1'32	3'23	Bidar. (c)		
23	17	44	65	23	29	28	101	35	6'1	7'4	-1'3	61	- 3	'541	- '039	8'0	-0'6	41	- 7'4	20'60	31'37	- 10'48	2'60	Gulbarga.		
20	12	42	30	67	16	62	60	56	7'4	7'1	+ 0'3	65	+ 2	'609	+ *012	4'1	+ 0'6	37	- 7'7	22'57	27'64	- 6'07	3'28	Raichur.		
102	4	21	18	46	6	28	114	31	4'6	4'0	+ 0'6	67	- 1	'588	0	4'4	+ 0'5	47	- 2'4	22'16	31'62	- 9'46	2'32	Hyderabad (Deccan).		
21	31	1	0	71	78	23	65	75	9'8			62	- 4	'610	- '019	4'4	+ 0'3	37	- 13'5	22'35	34'53	- 12'18	1'74	Hanamkonda.		

(a) Wind observations of 364 days.

(b) " " 364 "

(c) " " 364 "

\* Mean of 10 months.

TABLE

(2) Abstract of observations taken at 8 hrs. at 215

Number of sub-division.	STATION.	Height of barometer above sea-level in feet.	PRESSURE, 8 HRS., IN INCHES.								TEMPERATURE OF AIR.							
			Mean 8 hrs. pressure reduced to 32°.	Departure from normal of year.	Mean 8 hrs. pressure reduced to sea-level and to constant gravity at 45° Lat.	Highest pressure of year.	Lowest pressure of year.	Mean of 8 hrs. dry bulb of year.	Mean of 8 hrs. wet bulb of year.	Mean maximum of year.	Departure from normal of year.	Mean minimum of year.	Departure from normal of year.	Yearly mean between maximum and minimum.	Departure from normal of year.	Mean daily range of temperature.	Highest temperature observed during year.	Lowest temperature observed during year.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
XIV.—Mysore.																		
29	Chitaldrug	2,405	27.533	+.009	29.848	27.693	27.356	72.9	65.9	87.3	+0.3	67.4	0	77.3	+0.1	19.9	98.5	52.0
	Hassan	3,149	26.840	+.013	29.865	26.973	26.671	60.4	65.2	83.6	+0.3	63.1	+0.7	73.3	+0.5	20.4	96.2	50.7
	Bangalore	3,021	26.962	+.009	29.863	27.108	26.708	70.1	65.0	84.9	+0.4	64.1	-0.1	74.5	+0.1	20.8	97.3	51.6
	Mysore	2,518	27.146	+.007	29.867	27.588	27.247	72.6	66.7	86.3	-0.1	65.7	-0.1	76.0	-0.1	20.6	97.9	53.8
XV.—Madras.																		
30	Mangalore	72	26.866	-.001	29.872	30.007	29.661	79.6	74.3	87.8	+0.4	74.4	+0.9	81.1	+0.7	13.8	94.0	64.4
	Calicut	27	26.911	+.003	29.867	30.056	29.703	78.1	76.2	86.1	-0.6	74.6	+0.3	80.3	-0.1	11.4	93.0	65.2
	Cochin	9	26.937	+.005	29.874	30.087	29.761	79.6	74.5	87.8	0	75.3	+0.4	81.5	+0.2	12.5	93.8	67.9
	Trivandrum	198	29.746	+.014	29.876	29.894	29.578	77.3	74.0	84.4	+0.3	74.2	-1.0	79.3	-0.3	10.2	90.8	66.6
31	Pamban	37	29.876	-.004	29.841	30.067	29.713	81.5	76.2	86.1	-1.7	70.7	-0.7	81.4	-1.2	0.4	91.0	71.0
	Madura	447	29.474	+.005	29.854	29.659	29.293	80.7	73.4	93.6	-0.2	74.7	+0.8	84.1	+0.3	18.9	103.1	82.6
	Pudukkottai	318	29.610	+.010	29.861	29.799	29.430	80.1	72.0	94.1	+0.7	74.5	+0.5	84.3	+0.6	10.6	105.6	81.9
	Negapatam	31	29.989	+.009	29.849	30.077	29.712	80.7	75.3	90.6*	-0.2*	76.3	+0.1	83.5*	-0.1*	14.3*	102.6	64.2
	Trichinopoly	255	29.670	+.016	29.807	29.864	29.493	80.6	73.1	95.0	+0.7	74.1	-0.1	84.5	+0.3	20.9	106.1	80.2
	Coimbatore	1,341	28.598	+.017	29.874	28.777	28.413	76.6	70.6	89.0	-0.1	69.4	-0.3	79.7	-0.2	20.5	101.2	56.9
	Salem	913	29.019	+.018	29.872	29.203	28.843	77.1	71.5	93.4	+0.3	71.4	+0.4	82.4	+0.3	22.0	103.3	56.7
	Cuddalore	37	29.877	+.005	29.844	30.077	29.078	79.0	74.2	89.9	-0.7	74.0	+0.4	82.4	-0.1	14.9	101.6	58.2
	Vellore	707	26.206	+.003	29.857	29.412	29.001	77.1	71.9	92.2	+0.8	71.9	-0.6	82.1	+0.1	20.3	105.0	56.8
	Madras	22	26.889	+.004	29.841	30.104	29.650	81.0	75.4	91.1	+0.1	75.1	+0.3	83.1	+0.2	16.0	104.2	60.8
32	Cuddapah	428	26.481	+.005	29.847	29.884	29.275	81.3	73.6	94.1	-1.7	75.1	+0.6	84.6	-0.5	18.9	108.3	59.0
	Bellary	1,475	28.438	+.008	29.847	28.630	28.241	77.8	69.0	92.8	-0.5	70.9	-0.1	81.8	-0.3	22.0	105.8	58.7
	Kurnool	923	28.988	+.019	29.856	29.197	28.776	77.3	69.9	93.5	-0.4	71.9	+1.1	82.7	+0.3	21.5	107.1	50.6
33	Nellore	66	29.830	+.002	29.831	30.058	29.586	80.7	74.9	92.6	-1.4	75.5	+0.4	83.2	-0.5	17.1	105.9	62.4
	Masulipatam	15	29.887	+.006	29.837	30.131	29.605	80.0	75.1	90.4	-0.1	74.0	-0.5	82.2	-0.3	10.4	106.8	60.2
	Cocanada	26	29.870	+.011	29.833	30.130	29.558	79.4	74.7	88.5	0	74.6	-0.4	82.1	-0.2	14.9	106.7	59.3
	Walair (Vizagapatam)	226	29.728	+.006	29.817	30.108	29.300	80.0	73.7	87.1	+1.1	75.3	-1.0	81.2	+0.1	11.9	101.2	60.6
	Calicapatam	19	29.854		29.811	30.143	29.488	77.6	73.4	88.6		73.1		80.8		15.6	102.0	51.9
	Gopalpur	33	29.810	+.012	29.807	30.114	29.403	77.6	73.2	86.3	+0.3	73.3	+0.2	79.8	+0.3	13.0	98.8	54.8
Bay Islands.																		
1	P. V. Fraser	8	29.853		29.802	30.100	29.377	80.5	76.1									
	Port Blair	58	29.864	+.011	29.853	30.034	29.668	80.5	76.3	86.3	-0.9	76.3	-0.7	81.3	-0.8	10.0	94.2	68.5
	Table Island		29.819	+.004	29.843	29.989	29.600	80.3	75.8	84.6	-1.1	77.0	-0.1	80.8	-0.6	7.5	92.0	70.4
Kashmir.																		
13	Muzaffarabad		27.485			27.828	27.030	63.8	55.4	80.7		69.4*		71.9*		25.0*	109.0	31.9
	Srinagar	5,204	24.893	+.006	24.864	25.221	24.628	51.5	51.7†	65.3	-0.8	44.2	+0.1	54.7	-0.3	21.1	95.7	15.2
	Gulmarg	8,560	21.802	-.003	21.769	21.921	21.651	61.9	54.7	60.9	+2.4	46.7	-0.8	57.8	+0.8	24.2	85.2	30.3
	Dras	10,059	20.826	+.031	20.794	21.053	20.402	28.5	44.7†	45.8	-5.2	10.8	-1.5	32.8	-3.3	26.0	83.5	-35.1

N. B.—Elevations in italics indicate barometrical determinations.

NOTE.—The barometric readings are not reduced to sea-level, in the case of hill or plateau stations, the elevations of which exceed 3,200 feet.

\* Mean of 10 months.

† " " 8 "

‡ " " 8 "

B.—contd.

stations in India, etc., in the year 1918.

WIND DIRECTION.									WIND VELOCITY.			HYGROMETRY, 8 HRS.			CLOUD.			RAINFALL.			STATION.			
Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Mean velocity in miles per hour of year.	Normal velocity of year.	Departure from normal of year.	Mean humidity at 8 hrs. of year.	Departure from normal of year.	Mean vapour tension at 8 hrs. in inches of mercury of year.	Departure from normal of year.	Mean cloud amount at 8 hrs. of year.	Departure from normal of year.	Number of rainy days during year.	Departure from normal of year.	Normal rainfall of year.	Departure from normal of year.	Heaviest rainfall during year.		
20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44
53	3	9	52	45	11	77	91	24	5·4	6·9	-0·5	60	-1	·565	-0·026	4·5	0·3	39	-9·3	24·37	24·52	-0·15	4·10	
91	8	4	58	31	3	30	91	40	5·1	2·6	+2·5	81	+4	·577	-0·002	4·7	-0·9	54	-12·7	27·56	35·39	-7·83	2·90	Chitaldrug.
7	9	36	69	36	13	67	117	11	6·6	4·6	+2·0	75	-3	·556	-0·026	5·4	+0·3	48	-11·2	31·70	35·10	-3·40	3·74	Hassan.
20	9	51	53	9	8	95	115	5	5·9	7·3	-1·4	73	-4	·585	-0·023	4·7	-1·2	46	-9·6	28·45	31·21	-2·76	2·82	Bangalore.
12	29	48	170	26	9	12	30	20	4·8	2·1	+2·7	77	0	·779	+0·006	4·9	-0·3	113	-3·4	100·80	126·43	-25·63	4·60	Mysore.
177	16	60	40	20	4	5	10	43	3·7	6·3	-2·6	87	+4	·831	+0·023	5·1	+0·2	108	-6·0	97·90	117·20	-19·39	4·35	Calicut.
51	12	99	145	14	4	6	16	18	4·8	4·0	+0·8	78	-3	·786	-0·023	4·3	-0·6	122	-6·5	80·59	114·80	-34·01	4·87	Cochin.
102	54	52	25	10	3	2	15	102	4·5	4·4	+0·1	85	+3	·795	+0·005	5·7	+0·2	82	-12·0	56·43	64·16	-7·73	2·95	Irrivandrum.
2	45	45	24	40	68	85	23	33	9·8	7·6	+2·3	78	-2	·833	-0·036	3·5	0	54	+7·8	37·95	36·84	+1·11	2·07	Pamban.
5	61	64	32	7	6	9	85	96	4·4*	3·1	+1·3	70	-1	·729	-0·019	6·4	+2·1?	47	-2·0	25·04	33·03	-8·50	1·95	Madura.
85	67	54	12	1	13	20	56	57	4·4	...	...	67	-7	·670	-0·075	3·9	-2·0	52	-2·6	28·56	35·35	-6·79	2·19	Pudukkottai.
11	19	38	10	24	17	57	121	68	7·3	5·0	+2·3	77	+2	·808	0 P	4·5	-0·6	46	-9·8	56·16	54·15	+2·01	14·30	Negapatam.
36	44	46	10	6	15	81	96	31	4·1	4·2	-0·1	69	-3	·7·8	-0·024	4·0	-0·6	50	+3·0	27·42	32·66	-5·24	2·90	Trichinopoly.
128	16	64	19	5	28	83	20	2	4·5	3·1	+1·4	74	-9	676	-0·056	3·4	-1·5	37	8·0	23·05	22·20	+0·85	2·83	Coimbatore.
87	12	65	31	1	36	94	35	4	3·9	3·1	+0·8	75	-2	·701	-0·044	4·2	-0·3	46	-18·4	21·36	39·43	-18·07	1·30	Salem.
46	31	7	3	8	30	128	37	75	6·1	1·8	+4·3	76	-5	·772	-0·065	5·0	+0·7	53	-3·2	61·84	52·68	+9·16	6·48	Cuddalore.
810	1	3	4	2	2	0	126	17	3·2	...	...	78	+3	·720	+0·002	3·9	0	52	-4·7	32·92	42·50	-9·58	3·37	Vellore.
65	28	15	5	13	41	102	63	33	3·9	5·0	-1·1	77	0	·805	-0·006	4·7	-0·2	62	+4·1	75·00	40·85	+25·15	6·23	Madras.
30	33	19	26	57	24	11	75	91	...	...	...	69	+2	·723	+0·014	4·0	-0·3	40	-6·0	20·25	31·03	-10·78	3·65	Cuddapah.
46	21	7	37	42	26	40	85	61	4·9	4·8	+0·1	64	+3	·603	+0·034	4·4	-0·2	27	-8·5	17·34	20·13	-2·79	3·69	Bellary.
115	12	7	26	25	11	28	79	62	5·4	...	...	68	0	·643	+0·005	4·3	+0·5	41	-6·5	22·31	26·08	-9·77	2·43	Kurnool.
73	57	23	6	4	13	73	60	47	3·4	4·9	-1·5	77	+1	·787	-0·007	5·2	-0·6	45	+3·0	54·84	36·20	+18·58	5·80	Nellore. (o)
84	55	54	15	21	44	33	56	63	5·7	4·8	+0·9	80	-2	·815	-0·042	4·9	-0·1	59	+5·0	47·52	40·21	+7·31	3·75	Masulipatam.
63	37	74	5	4	3	60	82	37	6·5	5·8	+0·7	79	+2	·802	+0·012	6·6	+1·0	48	-4·9	30·25	38·33	-8·08	3·73	Cocanada.
50	19	50	9	2	16	126	59	34	4·9	...	...	74	+2	·758	+0·011	5·0	-0·1	60	0	23·53	37·25	-13·72	1·77	Waltair (Vizagapatam).
83	64	24	5	2	7	11	61	92	6·5	...	...	81	...	·779	...	3·2	...	54	+5·8	36·57	44·30	-7·73	2·84	Calingapatam.
2	98	9	1	1	75	83	6	90	7·2	8·0	-1·4	80	-1	·778	-0·005	3·9	+1·5	50	-7·0	34·86	45·30	-10·14	2·28	Gopalpur.
																							Bay Islands.	
24	58	42	12	11	28	130	39	17	...	...	...	80	...	·855	...	4·8	...	50	...	34·48	38·76	-4·28	2·46	P. V. Fraser.
73	23	34	41	28	18	63	55	35	5·7	5·5	+0·2	82	-8	·850	-0·038	5·7	-0·3	135	-5·0	128·03	117·07	+11·86	6·24	Port Blair.
17	54	30	43	16	23	90	56	27	11·6	...	...	81	-1	·837	-0·026	5·8	-1·1	88	-12·4	75·22	78·41	-2·50	4·39	Table Island.
																							Kashmir.	
855	3	4	5	5	38	45	9	1	1·0	...	...	50	...	·968	...	3·9	..	73	...	44·36	52·25	-7·89	2·70	Muzaffarabad.
108	24	12	12	54	52	10	90	58	2·8	2·6	+0·2	75†	-11	·361†	-0·027	4·7	+0·1	60	-9·7	24·74	26·47	-1·73	1·25	Srinagar.
64	6	21	13	18	4	1	7	9	8·3	...	...	67	-6	·365	-0·012	3·2	+0·1	35	...	13·41	15·16	-1·75	1·30	Gulmarg.
398	1	2	4	6	4	3	2	5	3·0	...	...	57‡	-71	·217‡	-0·036‡	3·8	-0·3	60	-7·1	10·85	21·22	-1·37	1·15	Dras.

(a) Wind observations of 356 days.

\* Mean of 11 months.

† " " " 10 "

‡ " " " 5 "

## TABLE

(2) Abstract of observations taken at 8 hrs. at 215

Number of sub-division.	STATION.	Height of barometer above sea-level in feet.	PRESSURE, 8 HRS., IN INCHES.							TEMPERATURE OF AIR.								
			Mean 8 hrs. pressure reduced to 32°.	Departure from normal of year.	Mean 8 hrs. pressure reduced to constant gravity at 45° Lat.	Highest pressure of year.	Lowest pressure of year.	Mean of 8 hrs. dry bulb of year.	Mean maximum of year.	Departure from normal of year.	Mean minimum of year.	Departure from normal of year.	Yearly mean of mean between maximum and minimum.	Departure from normal of year.	Mean daily range of temperature.	Highest temperature observed during year.	Lowest temperature observed during year.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
<b>Kashmir—concl.</b>																		
Leh	.	11,503	19.700	+.005	19.677	19.940	19.261	38.5	45.1*	58.0†	+1.6+	29.8	+0.2	45.3†	+0.9†	27.4†	85.3	-8.3
Skardu	.	7,605	22.866	-.010	22.836	23.242	22.426	47.2	46.1†	63.2†	+0.9	41.0	+1.6	52.5	+1.2	21.3	97.0	8.0
Gilgit	.	4,300	25.141	+.012	25.114	25.580	24.608	50.4	56.3§	74.2†	+1.6	51.5	-1.1	62.0	+0.3	22.7	104.7	23.7
<b>Baluchistan.</b>																		
15 Fort Sandeman	.	4,614	25.384	...	25.353	25.623	25.053	62.5	54.0§	80.9	...	53.2	...	66.8	...	27.1	110.1	22.1
Quetta	.	5,502	24.634	+.006	24.504	24.880	24.381	40.5	40.8†	74.0	+0.4	42.6	-1.7	58.2	-0.7	31.3	100.5	7.7
Chaman	.	4,311	25.656	-.022	25.618	25.962	25.330	60.2	63.4†	77.3	-0.2	53.0	-0.8	65.2	-0.5	24.9	106.4	20.5
Kalat	.	6,630	23.743	...	23.705	23.064	23.489	45.5	46.0†	71.8	-1.9	39.3	55.5	32.5	97.4	7.5		
Dalbandin	.	2,772	27.093	...	27.056	27.458	26.720	60.8	52.9†	86.3	...	45.0†	...	62.6†	...	35.3†	115.4	18.0
Pasni	.	29.800	29.850	...	29.239	29.479	29.179	67.1	66.0§	...	61.4	...	73.2§	...	25.7§	104.3	40.1	
Panjur	.	26.715	26.673	27.015	26.380	59.2	52.2†	85.1	...	55.0	...	70.1	...	30.1	110.2	22.4		
Robat	.	26.858	26.810	27.287	26.541	63.7	51.5	85.9	...	51.1	...	68.5	...	34.7	113.2	19.0		
Seistan (a)	.	28.146	28.690	27.690	58.7	51.8†	81.2	...	53.8	...	67.5	...	27.3	110.2	18.0			
<b>Hill stations, excluding Kashmir and Baluchistan.</b>																		
Parachinar	.	6,000	24.434	+.013	24.410	24.636	24.005	57.0	49.8†	71.4	+1.3	47.0	-0.1	59.6	+0.6	23.5	99.6	21.1
Cherat	.	4,256	25.685	+.012	25.653	25.978	25.349	62.2	50.5	72.0	-0.4	58.6	0	64.6	-0.2	18.0	104.8	21.5
Drosh (a)	.	...	25.088	...	25.375	24.700	57.1	50.5	73.6	+0.7	52.5	+0.9	63.1	+0.8	21.1	106.3	20.6	
Murree	.	6,333	23.797	-.029	23.765	24.000	23.461	55.5	48.5	64.1	-1.0	51.5	+1.3	57.8	+0.1	12.5	90.1	25.6
Simla	.	7,232	23.097	+.013	23.050	23.292	22.873	53.5	47.6†	60.2	-0.7	49.5	-0.2	54.9	-0.5	10.7	80.4	28.6
Chakrata	.	7,072	23.336§	-.037	23.295§	23.558	23.098	56.0	49.2	65.3	+1.1	50.2	+0.6	57.8	+0.9	15.1	86.3	30.3
Mukteswar	.	7,592	22.833	-.002	22.792	23.047	22.506	53.3	48.0†	63.0	-0.2	47.2	-1.1	55.5	-0.7	16.7	80.3	20.8
Darjiling	.	7,432	22.037	-.017	22.892	23.118	22.700	51.7	49.4	60.0	+1.2	47.9	+0.5	54.0	+0.9	12.1	75.5	29.8
Shillong	.	4,920	25.122	+.007	25.074	25.297	24.860	61.1	56.1	69.4	-0.7	53.1	-0.2	61.2	-0.5	16.3	79.0	30.1
Cherrapunji	.	4,300	25.673	-.002	25.614	25.871	25.408	62.3	58.6	68.3	-0.2	56.9	-0.3	62.6	-0.3	11.4	80.6	38.8
Netarhat	.	26.150	26.108	26.371	25.928	60.1	59.0	78.2	...	56.5§	...	68.3§	...	23.5§	97.2	36.0		
Maymyo	.	3,546	26.415	-.010	26.360	26.597	26.103	63.7	61.2	75.4	-1.6	57.3	+1.3	66.4	-0.1	18.1	86.2	32.6
Pachmarhi	.	3,528	26.431	-.003	26.379	26.631	26.154	66.7	58.9	80.9	+1.1	60.1	-0.9	70.5	+0.1	20.8	101.0	38.1
Mount Abu	.	3,945	26.035	+.008	25.985	26.237	25.766	67.7	56.8	75.8	-0.1	61.7	-0.3	68.7	-0.2	14.1	95.2	41.6
Mercara	.	3,781	26.229	-.004	26.162	26.352	26.064	64.7	62.3	76.5	-0.1	60.1	-1.2	68.3	-0.7	10.3	90.2	49.8
Ootacamund	.	7,327	23.065	+.015	23.001	23.164	22.944	57.5	51.8	66.0	+0.5	48.4	-0.8	57.2	-0.1	17.6	78.7	31.7
Kodaikanal	.	7,698	22.632	-.001	22.767	22.921	22.719	56.2	50.5	65.3	+0.7	48.8	-1.3	57.5	-0.3	15.5	76.4	37.2
<b>Extra India.</b>																		
Singapore (b)	.	10	29.862	-.073	29.793	29.983	29.728	82.5	87.3	-0.5	73.8	0	80.5	-0.3	13.5	91.5	67.0	
Penang (b)	.	17	29.833	-.082	29.775	29.998	29.647	81.5	89.1	-0.3	72.2	-1.6	80.7	-0.9	16.9	95.5	65.0	
Trincomalee	.	98	29.814	+.007	29.841	30.002	29.661	78.5	74.1	90.1	+1.5	76.0	-0.3	83.0	+0.6	14.1	101.2	66.3

N. B.—Elevations in italics indicate barometrical determinations.  
 Note.—The barometric readings are not reduced to sea-level, in the case of hill or plateau-stations, the elevations of which exceed 3,200 feet.

(a) Aneroid.

(b) 8 hrs. observations.

*	Mean of 5 months.
†	11 "
§	10 "
‡	9 "
¶	7 "
§	6 "
	5 "
	8 "

**ANNUAL SUMMARY, 1918.**

CONTINUED

**B—contd.**

*stations in India, etc., in the year 1918.*

WIND DIRECTION.										WIND VELOCITY.			HYGROMETRY, 8 HRS.			CLOUD.			RAINFALL.			STATION.			
Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Mean velocity in miles per hour of year.	Normal velocity of year.	Departure from normal of year.	Mean humidity at 8 hrs. of year.	Departure from normal of year.	Mean vapour tension at 8 hrs. in inches of mercury of year.	Departure from normal of year.	Mean cloud amount at 8 hrs. of year.	Departure from normal of year.	Number of rainy days during year.	Departure from normal of year.	Rainfall of year.	Normal rainfall of year.	Departure from normal of year.	Heaviest rainfall during year.		
20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	
236	6	24	14	18	57	6	2	1	2·9	1·5	+1·4	41†	— 8†	·196†	— 012†	4·4	— 0·4	4	— 5·6	1·25	9·21	— 1·96	0·12	Kashmir—contd.	
273	0	4	20	1	14	23	27	3	3·1	...	...	50‡	— 12‡	·219‡	— 060‡	4·3	— 0·5	11	— 8·0	3·64	7·66	— 4·02	0·41	Leh.	
342	0	1	0	0	1	18	0	3	0·3	...	...	55*	+ 7*	·370*	+ 082*	4·0	— 0·9	10	— 5·9	2·63	4·91	— 2·28	0·36	Skardu.	
																								Gilgit.	
																									Baluchistan.
274	4	5	2	3	24	29	23	1	2·5	...	...	44*	...	·200*	...	1·5	...	25	...	11·18	...	...	1·26	Fort Sandeman.	
308	3	6	9	14	14	5	4	2	1·9	2·1	-0·2	61†	+ 8†	·291†	— 029†	2·1	+ 0·2	30	+ 5·7	8·33	10·02	— 0·69	0·05	Quetta.	
40	3	14	106	101	64	26	5	6	3·9	5·9	-2·0	54§	+ 11*	·333§	+ 066*	2·2	+ 0·3	21	+ 2·4	9·99	7·12	+ 2·67	1·45	Chaman.	
358	0	0	0	0	0	6	0	1	3·8	...	...	57*	+ 13%	·240	- 028%	1·6	...	11	- 6·8	4·61	6·96	— 2·35	1·32	Kalat.	
110	20	72	44	18	22	47	28	6	4·2	...	...	60§	...	·286§	...	1·6	...	0	...	3·45	3·77	— 0·32	0·71	Dalbandin.	
39	34	19	31	10	11	38	102	81	6·2	...	...	79	...	·642	...	4·1	...	4	...	6·24	7·39	— 1·15	3·43	Pasni.	
90	11	116	94	11	6	13	8	16	4·6	...	...	53§	...	·302§	...	2·1	...	8	...	2·44	...	...	0·61	Panjur.	
73	2	17	21	2	0	122	126	2	8·9	...	...	42	...	·255	...	1·3	...	12	...	4·87	3·76	+ 1·11	1·12	Robat.	
138	27	0	1	0	0	0	2	195	7·3	...	...	53§	...	·285§	...	1·1	...	9	...	2·67	...	...	0·79	Seistan.	
																								Hill stations, excluding Kashmir and Baluchistan.	
365	0	0	0	0	0	0	0	0	0·9	...	...	52§	— 3	·269§	— 008	2·3	— 1·1	58	— 5·8	26·84	20·60	— 2·85	2·11	Parachinar.	
114	112	5	1	16	17	3	9	77	6·5	8·3	-1·8	45	— 8	·268	— 048	1·9	— 1·1	38	— 3·7	25·77	28·00	— 2·23	2·02	Cherat.**	
327	0	10	19	4	1	3	1	0	2·7	...	...	56	— 4	·268	— 000	3·1	+ 0·2	37	— 3·2	15·36	16·76	— 1·40	2·14	Drosh.	
161	67	13	35	71	6	2	1	9	4·0	5·3	-1·3	51	— 5	·243†	— 026	3·1	— 0·5	70	— 6·3	57·61	59·00	— 1·39	3·14	Murree.	
89	8	112	35	5	0	89	15	12	6·4	4·6	+ 1·8	62	— 2	·300	+ 012	3·7	+ 0·4	81	— 4·1	60·14	63·07	— 2·03	4·52	Simla.	
68	9	11	44	20	8	11	185	9	6·4	...	...	63§	+ 2§	·282§	+ 010§	3·7	— 0·4	66	— 13·6	27·32	52·34	— 25·02	1·86	Mukteswar.	
237	11	24	24	15	6	3	28	16	1·9	8·5	-1·6	85	0	·347	— 006	6·7	+ 0·9	133	+ 11·7	130·46	125·44	+ 5·02	9·65	Darjiling.	
262	0	3	16	11	31	37	3	2	2·2	...	...	73	— 1	·413	+ 001	4·9	+ 0·6	121	— 4·7	92·65	88·05	+ 8·60	5·77	Shillong.	
30	14	64	86	34	39	43	43	8	4·7§	...	...	80	— 1	·406	— 003	6·7	+ 1·3	151	— 10·8	510·85	424·02	+ 86·83	24·71	Cherrapunji.	
15	27	12	8	16	8	41	70	169	3·8	...	...	55	...	·408	...	2·2	...	77	...	56·47	...	...	2·90	Netarhat.	
232	1	5	3	4	10	69	21	0	1·5	...	...	87	+ 3	·527	— 012	5·3	+ 1·0	92	+ 1·4	51·74	60·20	— 8·46	2·40	Maymyo.	
83	12	21	19	24	17	48	92	48	4·2	4·3	-0·1	65	+ 5	·428	— 004	3·2	— 0·5	49	— 27·9	48·04	75·75	— 26·81	4·62	Pachmarhi.	
73	28	33	6	10	22	132	37	24	5·1	5·7	-0·6	52	— 2	·364	— 013	3·4	+ 0·1	22	— 31·9	36·28	58·19	— 21·01	9·95	Mount Abu.	
82	18	65	47	4	3	41	74	28	3·3	4·3	-1·0	88	+ 3	·534	— 008	5·6	— 0·7	130	— 9·3	84·52	126·47	— 41·95	3·80	Mercara.	
78	2	13	55	72	41	15	57	32	3·4	...	...	70	+ 2	·331	+ 007	5·8	+ 0·8	91	— 13·7	53·81	56·46	— 2·65	2·65	Ootacamund.	
1	51	40	50	55	11	13	70	74	8·5	...	...	70	+ 1	·314	— 006	4·3	— 0·2	104	— 3·7	57·29	62·19	— 4·90	2·48	Kodaikanal.	
																								Extra India.	
102	18	77	13	49	17	54	4	32	...	...	...	...	...	...	...	7·0	+ 1·8	110	— 14·6	96·63	96·13	+ 0·50	6·76	Singapore.	
0	97	143	6	62	12	2	1	52	...	...	...	...	...	...	...	...	...	184	+ 1·4	86·56	102·63	— 6·07	6·38	Penang.	
85	8	23	21	3	13	129	75	7	5·0	7·3	-2·3	81	— 3	·785	— 074	5·6	+ 2·3	70	— 1·8	53·38	62·15	— 8·77	3·11	Trincomalee.	

\* Mean of 10 months.

† " " 5 "

‡ " " 11 "

§ " " 8 "

|| Wind observations of 364 days.

\*\* " " 354 "

†† " " 331 "

TABLE

(2) Abstract of observations taken at 8 hrs. at 215

Number of sub-division.	STATION.	Height of bar-cistern above sea-level in feet.	PRESSURE, 8 HRS., IN INCHES.						TEMPERATURE OF AIR.									
			3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	2																	
<b>Extra India—contd.</b>																		
Colombo	.	24	29.920	+.003	29.870	30.069	29.786	75.9	73.6	86.5	-0.7	74.6	-0.9	80.5	-0.8	11.9	92.6	63.4
Hambantota	.	64	29.874	...	29.864	30.026	29.744	75.3	73.3	86.9	...	74.1	...	80.0	...	11.8	94.5	60.0
Minicoy	.	7	29.960	+.022	...	30.089	29.805	...	...	...	...	...	...	...	...	...	...	...
Amini Divi	.	18	29.927	-.002	29.868	30.069	29.800	83.0	77.0	88.8	+1.9	77.2	+0.2	83.0	+1.1	11.6	97.4	68.3
Gyantse	.	13,110	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Pharijong	.	14,400	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Gangtok	.	5,667	24.413	-.044	24.368	24.648	24.137	57.2	54.3	67.0	-1.2	53.0	+7.2	60.0	+3.0	14.0	81.8	38.2
Gartok (c)	.	15,100	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Kashgar (c)	.	4,255	25.520	-.091	...	26.250	25.040	50.1	56.1*	69.0	+2.4	42.9	0	56.0	+1.2	26.1	104.8	43
Kabul (c)*	.	...	24.103	-.146	...	24.400	23.890	56.6	53.7†	81.5	+0.8	53.2	+5.4	67.3	+3.1	28.3	106.6	13.2
Meshed†	.	8,104	...	...	...	...	...	42.1	46.7§	69.0	+1.3	36.5	-1.3	48.2	0	23.4	96.4	11.0
Jask	.	13	29.861	+.001	29.828	30.260	29.302	73.5	69.9	87.1	+0.7	72.2	-1.4	79.6	-0.8	14.9	106.5	51.9
Muscat	.	20	29.861	+.004	29.830	30.238	29.380	80.6	70.2	88.4	+3.3	77.1	-1.3	82.8	+1.0	11.3	112.6	60.6
Bushire	.	14	29.867	0	29.843	30.286	29.431	73.0	68.3	81.0	-1.1	69.3	-0.3	74.6	-0.7	12.7	106.2	45.3
Busrah	.	26	29.905	-.005	29.899	30.363	29.480	70.5	61.2	86.6	+2.3	62.1	-2.0	74.3	-0.3	24.6	116.0	32.6
Kerman (c)	.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Ispahan (c)	.	5,817	24.275	-.039	...	24.500	23.910	51.7	46.7†	72.5	-1.3	46.1	+0.5	59.3	-0.4	26.3	102.4	19.2
Tehran (c)	.	4,008	25.763	-.109	...	26.250	25.420	57.6	53.4	71.8	-1.6	51.0	+0.8	61.4	-0.3	20.9	106.8	22.0
Baghdad	.	127	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Aden	.	94	29.828	-.001	29.855	30.069	29.556	79.8	75.1	86.9	-1.1	77.6	-0.4	82.3	-0.7	9.3	97.0	65.1
Zanzibar	.	72	30.014	+.021	30.012	30.209	29.799	78.3	74.1	88.4	-0.4	75.8	-0.6	79.6	-0.5	7.7	89.6	70.6

N.B.—Elevations in italics indicate barometrical determinations.

Note.—The barometric readings are not reduced to sea-level in the case of hill or plateau stations, the elevations of which exceed 3,200 feet.

(c) Aneroid.

\* Mean of 8 months.

† " 7 "

‡ " 5 "

|| " 3 "

|| " 11 "

|| " 9 "

|| " 10 "

## B—concl'd.

stations in India, etc., in the year 1918.

WIND DIRECTION.										WIND VELOCITY.		HYGROMETRY, 8 HRS.			CLOUD.			RAINFALL.			STATION.			
Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Mean velocity in miles per hour of year.	Normal velocity of year.	Departure from normal of year.	Mean humidity at 8 hrs. of year.	Departure from normal of year.	Mean vapour tension at 8 hrs. in inches of mercury of year.	Departure from normal of year.	Mean cloud amount at 8 hrs. of year.	Departure from normal of year.	Number of rainy days during year.	Departure from normal of year.	Normal rainfall of year.	Departure from normal of year.	Heaviest rainfall during year.	STATION.	
20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44
180	28	30	4	4	1	81	34	3	3'4	5'8	-2'4	89	+ 7	'794	-0'060	7'1	+1'8	96	-12'7	58'03	84'57	-26'54	4'45	Colombo.
22	95	40	0	0	0	43	125	40	8'7	...	...	90	...	'791	...	4'5	...	75	...	39'50	...	...	3'05	Hambantota.
5	72	36	25	13	8	16	97	93	4'9	8'9	-2'0	...	...	...	...	4'3	-0'3	84	-8'5	65'43	62'84	+2'50	5'70	Minicoy.
15	84	46	9	8	3	33	86	81	7'6	...	...	75	- 2	'847	-0'013	5'2	-0'2	81	+ 6'4	61'13	59'57	+7'58	4'31	Aminiv Divi.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Gyantse.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Pharijung.
310	1	39	0	2	1	0	1	2	1'8	...	...	83	+ 1	'412	-0'007	2'9	-1'0	161	-4'4	136'30	136'43	-0'13	3'74	Gangtok.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Gartok.
230	5	17	1	5	1	4	5	21	0'9	2'1	-1'2	60*	+10	'398*	+0'090	3'6	+0'1	8	-0'8	3'07	3'18	-0'11	1'00	Kashgar.†
0	31	20	0	1	4	68	91	28	...	...	...	65‡	+14‡	'266‡	+0'037‡	4'5	+3'5	2	-6'1	1'16	3'10	-1'94	0'60	Kabul.§
142	3	0	1	0	5	0	0	0	1'4	...	...	70.1	+ 2	'273	-0'044	4'8	+0'3	18	+ 1'2	9'07	7'03	+2'04	1'14	Meshed.**
41	71	43	109	6	4	3	25	63	8'0	8'7	-0'7	74	+ 2	'684	-0'050	1'6	-0'3	8	-0'9	6'18	4'20	+ 1'98	3'27	Jask.
103	12	17	60	17	7	3	52	94	3'3	3'1	+0'2	82††	- 6	'641††	-0'096	1'9	0	5	-3'2	2'38	4'16	-1'78	0'98	Muscat.
183	34	37	35	17	8	4	20	72	5'1	5'8	-0'7	70	+ 1	'600	-0'019	2'3	+0'2	18	0	7'76	10'85	-3'09	1'30	Bushire.††
20	13	28	24	17	13	44	179	27	5'5	...	...	61	...	'447	...	2'6	...	27	+12'3	13'85	6'38	+7'47	1'35	Busrah.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Kerman.	
320	5	0	4	0	0	15	17	4	1'3	2'9	-1'6	64	- 4	'274	-0'078	1'7	-0'4	10	-3'7	5'15	4'64	+0'51	1'4	Ispahan.
180	52	78	12	5	6	24	4	2	3'9	2'2	+1'7	57	- 5	'334	+0'032	3'6	+1'1	25	-1'9	8'09	9'30	-1'21	1'02	Tehran.¶¶
...	...	...	...	...	...	...	...	...	2'7	...	...	...	...	...	...	...	...	...	...	...	...	...	Baghdad.	
87	51	162	10	26	12	12	1	4	9'4	9'1	+0'3	80	+ 6	'817	+0'019	3'6	-0'4	1	-3'5	0'41	2'10	-1'69	0'18	Aden.
38	30	50	8	39	106	90	4	0	4'5	4'9	-0'4	81	- 2	'786	-0'030	6'3	+0'1	84	-4'8	56'50	61'52	-5'02	4'60	Zanzibar.

\* Mean of 8 months.

† Wind observations of 298 days.

‡ Mean of 7 months.

§ Wind observations of 243 days.

|| Mean of 3 months.

\*\* Wind observations of 214 days.

†† Mean of 11 months.

†† Wind observations of 360 days.

§§ Mean of 9 months.

¶¶ Mean of 10 days.

¶¶ Wind observations of 263 days.

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**Table C.—Abstract of observations taken at 8 hrs. at 65  
fourth and fifth class stations in India, etc., in the  
year 1918.**

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TABLE

Abstract of observations taken at 8 hrs. at 65 fourth and

Number of sub-division	Station.	TEMPERATURE OF AIR.										WIND DIRECTION.									
		Mean of 8 hrs. dry bulb of year.	Mean of 8 hrs. wet bulb of year.	Mean maximum of year.	Departure from normal of year.	Mean minimum of year.	Departure from normal of year.	Yearly mean of mean between maximum and minimum.	Departure from normal of year.	Mean daily range of temperature.	Highest temperature observed during year.	Lowest temperature observed during year.	Calm.	N.	N. E.	S. E.	S.	S. W.	W.	N. W.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
<b>III.—Assam.</b>																					
4	Bishnath	69·8	67·1	83·9	+0·6	64·3	+3·1	74·1	+1·8	19·7	99·3	38·1	...	...	...	...	...	...	...	...	
	Borjuli	73·2	69·9	85·0	+0·1	62·2	-1·2	73·6	-0·6	22·8	90·0	36·8	...	...	...	...	...	...	...	...	
	Chandkhira	69·8	69·0	88·0	+1·7	63·5	-1·0	75·7	+0·3	24·5	105·6	36·6	...	...	...	...	...	...	...	...	
	Doom Dooma	67·7	65·7	84·8	+5·1	63·6	+1·0	74·2	+3·1	21·3	100·7	38·7	...	...	...	...	...	...	...	...	
	Dikom	68·8	66·5	82·9	+0·7	63·3	+0·1	73·1	+0·4	19·5	100·2	38·4	...	...	...	...	...	...	...	...	
	Golaghat	68·9	67·7	82·1	+0·6	62·6	...	72·3	...	19·5	95·0	38·2	...	...	...	...	...	...	...	...	
	Hailakandi	71·2	69·0	85·2	-0·7	68·2c	+0·3c	75·8c	-0·2c	19·3	95·4	38·8	...	...	...	...	...	...	...	...	
	Jorehat	69·6	67·4	82·6	-0·4	66·2	+1·1	74·4	+0·3	16·6	96·5	40·8	...	...	...	...	...	...	...	...	
	Lumding	70·9	69·1	84·7	...	63·5	...	74·1	...	21·2	96·7	39·0	...	...	...	...	...	...	...	...	
	Messa	75·3	69·4	87·8	-0·4	62·9	+0·4	75·4	0	24·9	99·1	38·8	...	...	...	...	...	...	...	...	
	Panerihat	66·1	64·2	84·3	+1·2	60·4	-2·1	72·4	-0·5	24·0	97·3	35·3	...	...	...	...	...	...	...	...	
<b>III.—Bengal.</b>																					
5	Comilla	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
	Brahmanbaria	75·0	70·7	86·2	-0·2	66·6	-1·4	76·4	-0·8	19·6	96·3	42·1	...	...	...	...	...	...	...	...	
	Faridpur	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
	Gosundo	77·6	71·9	86·7	-0·1	68·6a	+1·6a	77·9a	+0·7	20·0	100·9	39·7	...	...	...	...	...	...	...	...	
	Pabna	75·6	71·1	88·0	-1·0	65·8	+2·4	78·4	+0·3	19·3	99·3	45·6	...	...	...	...	...	...	...	...	
	Sirajganj	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
	Kampur Boalia	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
	Malda	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
	Rangpur	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
	Dam Dim	68·4	66·0	87·8	-0·1	60·0	-1·3	73·9	-0·7	27·9	99·8	34·9	...	...	...	...	...	...	...	...	
	Kalchini	74·3	69·4	85·3	+0·6	62·3	-0·4	73·8	+0·1	23·0	96·1	37·0	...	...	...	...	...	...	...	...	
	Nagrakata	75·2	68·7	84·6	-0·1	63·7	-1·1	74·2	-0·6	20·8	96·1	41·0	...	...	...	...	...	...	...	...	
	Cooch Behar	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
	Krishnagar	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
	Bankura	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
	Raniganj (Asansol)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
<b>IV.—Bihar and Orissa.</b>																					
7	Hazaribagh	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
8	Bhagalpur	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
	Muzaffarpur	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
	Motihari	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
	Chapra	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
	Arrah	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
	Dehri	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	

c Mean of 10 months.

a " " 11 "

C.

*fifth class stations in India, etc., in the year 1918.*

Abstract of observations taken at 8 hrs. at 65 fourth and

Number of subdivision.	Station.	TEMPERATURE OF AIR.												WIND DIRECTION.									
		Mean of 8 hrs. dry bulb of year.	Mean of 8 hrs. wet bulb of year.	Mean maximum of year.	Departure from normal of year.	Mean minimum of year.	Departure from normal of year.	Yearly mean of mean between maximum and minimum.	Departure from normal of year.	Mean daily range of temperature.	Highest temperature observed during year.	Lowest temperature observed during year.	Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22		
<b>V.—United Provinces of Agra and Oudh.</b>																							
10	Meerut	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Dehra Dun	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
<b>IX.—Rajputana.</b>																							
18	Udaipur	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
<b>XII.—Central Provinces.</b>																							
23	Chhindwara	70.8	61.2	67.8	...	68.2	...	75.6	...	24.6	107.1	89.7	232	20	9	3	1	1	7	36	5		
<b>XIII.—Hyderabad.</b>																							
27	Parbhani	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
<b>XV.—Madras.</b>																							
31	Tinnevelly	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
32	Anantapur	77.1	73.1	83.0	...	71.3	...	82.2	...	21.6	105.6	54.6	...	...	...	...	...	...	...	...	...	...	...
33	Guntur	79.6	74.8	83.9	...	73.9	...	83.0	...	19.9	108.2	57.6	...	...	...	...	...	...	...	...	...	...	...
	Koraput	68.8	64.4	62.0	...	62.2	...	72.1	...	10.8	98.0	38.8	...	...	...	...	...	...	...	...	...	...	...
<b>Bay Islands.</b>																							
1	Car Nicobar	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
<b>Kashmir.</b>																							
19	Jammu	71.0	63.1	85.3	...	65.7	...	75.6	...	19.5	109.9	41.3	0	127	174	15	13	11	18	8	4	...	...
	Sonamarg	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Kargil	42.3	48.0*	59.1	...	24.9	...	42.0	...	34.2	95.5	-22.5	153	85	4	10	54	12	2	1	44	...	...
<b>Baluchistan.</b>																							
16	Harnal	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
<b>Hill stations, exclusive of Kashmir.</b>																							
	Panighatta	71.4	68.7	83.5	0	66.4	+1.4	74.9	+0.7	17.1	94.5	47.5	...	...	...	...	...	...	...	...	...	...	...
	Kurseong	62.7	62.1	68.5	+0.5	56.6	-0.1	62.6	+0.2	11.9	78.4	42.3	...	...	...	...	...	...	...	...	...	...	...
	Gnatong	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Lachung	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Dharmpore	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Mussooree	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Poo †	...	...	...	...	61.2	+2.4	40.1	+1.5	50.6	+1.9	21.1	89.8	18.1	76	1	10	20	30	40	50	10	11
	Kailang	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Bakloh	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Pishin	...	...	...	...	74.8	-2.2	39.1	-3.1	56.7	-2.6	36.2	100.1	9.0	...	...	...	...	...	...	...	...	

\* Mean of 7 months.

† " "

C—contd.

fifth class stations in India, etc., in the year 1918—contd.

WIND VELOCITY.				HYGROMETRY, 8 HRS.				CLOUD.				RAINFALL.				Station.
Mean velocity, miles per hour.	Normal.	Departure from normal.	Mean humidity at 8 hrs. of year.	Departure from normal of year.	Mean vapour tension at 8 hrs. in inches of mercury of year.	Departure from normal of year.	Mean cloud amount at 8 hrs. of year.	Departure from normal of year.	Number of rainy days during year.	Departure from normal of year.	Rainfall for the year.	Normal rainfall for the year.	Departure from normal of year.	Heaviest rainfall during year.		
23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	
2.0	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	V.—United Provinces of Agra and Oudh.
																Meerut.
																Dehra Dun.
																I.X.—Rajputana.
																Udaipur.
																XII.—Central Provinces.
																Chhindwara.
																XIII.—Hyderabad.
																Parbhani.
																XV.—Madras.
																Tinnevelly.
																Anantapur.
																Guntur.
																Koraput.
																Bay Islands.
																Car Nicobar.
																Kashmir.
																Jammu.
																Sonamarg.
																Kargil.
																Baluchistan.
																Harnai.
																Hill stations, exclusive of Kashmir.
																Panighatta.
																Kurseong.
																Gnatong.
																Lachung.
																Dharmpore.
																Mussooree.
																Poo.
																Kailang.
																Bakloh.
																Pishin.

† Mean of 7 months.  
‡ n 11 n

\* Wind observations for 278 days.

TABLE

*Abstract of observations taken at 8 hrs. at 65° fourth and*

Number of Sub-division.	Station.	TEMPERATURE OF AIR.												WIND DIRECTION.									
		Mean of 8 hrs. dry-bulb of year.	Mean of 8 hrs. wet-bulb of year.	Mean maximum of year.	Departure from normal of year.	Mean minimum of year.	Departure from normal of year.	Yearly mean of mean between maximum and minimum.	Departure from normal of year.	Mean daily range of temperature.	Highest temperature observed during year.	Lowest temperature observed during year.	Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22		
<b>Extra India.</b>																							
Chumbi	.	40.6	48.4†	56.4	—	35.3	—	45.9	—	21.1	70.0	11.2	...	...	...	...	...	...	...	...	...	...	
Pemba	.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Abadan	.	78.2	64.9	90.1	—	64.6	—	77.4	—	25.5	119.0	37.0	1	124	18	3	13	72	25	6	101	...	
Ahwaz	.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Kurnah*	.	80.9	69.7	95.1	—	70.5	—	82.9	—	24.6	111.8	50.1	13	3	3	4	3	1	3	8	24	...	
Nasiriyah†	.	80.3	64.2	97.4	—	69.3	—	88.4	—	* 28.1	115.6	49.5	...	...	...	...	...	...	...	...	...	...	
Shahroband	.	81.4	68.1	97.2	—	66.1	—	81.7	—	31.1	118.5	46.0	...	...	...	...	...	...	...	...	...	...	
Muhammaraht	.	57.0	55.0	71.4	—	61.3	—	61.3	—	20.0	93.3	33.0	...	...	...	...	...	...	...	...	...	...	

\* Mean of 6 months.

† Mean of  
July, August,  
September.

C.—concl'd.

*fifth class stations in India, etc., in the year 1918—concl.*

(a) Wind Observations for 62 days.  
(c) " " 362 "

† Mean of 8 months.  
‡ Rainfall of 4 months.

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**Addenda Sheet of 10 and 16 hrs. Observations in Table A  
of 1918, Monthly Weather Review.**

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## ANNUAL SUMMARY, 1918.

*Addenda Sheet of Observations taken at 10 hrs. and*

Number of subdivision.	STATION.	Height of bar-cistern above sea-level in feet.	PRESSURE.							TEMPERATURE OF AVE.							TEMPERATURE, WET-BULB.							
			Mean of 10 hrs.	Mean of 16 hrs.	Mean daily range.	Mean of daily mean pressures.	Departure from normal.	Mean reduced to sea-level and to gravity at 45° lat.	Mean maximum.	Mean minimum.	Mean daily range.	Highest maximum.	Lowest minimum.	Absolute range.	Mean 10 hrs.	Mean 16 hrs.	Mean of daily means.	Departure from normal.	Mean minimum.	Mean 10 hrs.	Mean 16 hrs.	Mean of three previous columns.		
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
31	January 1918. XV.-Madras. Trivandrum . . .	198	29.757	29.645	'112	29.704	-'033	29.892	82.1	71.5	10.6	85.0	67.7	17.3	78.7	60.0	76.0	-1.1	...	72.8	74.2	...		
31	February 1918. XV.-Madras. Trivandrum . . .	198	29.837	29.718	'119	29.779	+'056	29.907	84.1	60.0	14.2	85.9	65.7	20.2	79.0	62.8	76.0	-2.6	...	69.9	73.0	...		
31	March 1918. XV.-Madras. Trivandrum . . .	198	29.773	29.649	'124	29.715	+'014	29.841	87.2	74.5	12.7	89.5	71.0	16.6	88.2	65.4	79.3	-1.0	...	74.4	76.3	...		
31	April 1918. XV.-Madras. Trivandrum . . .	198	29.723	29.609	'114	29.670	+'016	29.796	88.1	77.8	10.3	90.7	74.3	16.4	85.2	85.8	82.0	+0.1	...	77.0	77.8	...		
31	May 1918. XV.-Madras. Trivandrum . . .	198	29.668	29.574	'094	29.626	-'009	29.753	83.9	75.9	8.0	89.7	73.0	16.7	81.3	82.0	78.8	-2.5	...	76.4	76.8	...		
31	June 1918. XV.-Madras. Trivandrum . . .	198	29.716	29.630	'086	29.678	+'026	29.805	83.3	75.1	8.2	86.3	71.6	14.7	81.1	81.6	78.0	-0.4	...	75.8	76.0	...		

16 hrs. in Table A of 1918, Monthly Weather Review.

VAPOUR TENSION IN INCHES OF MERCURY.										HUMIDITY.						CLOUD.						WIND DIRECTION.						WIND STEADINESS.		WIND VELOCITY.		RAINFALL.			STATION.	Number of sub-division.
From minimum,	Mean 10 hrs.	Mean 16 hrs.	Mean of daily means,	Departure from normal.	From minimum,	Mean 10 hrs.	Mean 16 hrs.	Mean of daily means,	Departure from normal.	Mean 10 hrs.	Mean 16 hrs.	Mean of two previous columns,	Departure from normal.	Calm.	N.	N. E.	E.	S. E.	S.	S. W.	W.	N. W.	Average percentage.	Normal percentage.	Mean velocity in miles per diem.	Normal.	Total rainfall for the month.	Heaviest rainfall during the month.								
24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56				
...	725	753	...	...	75	72	..	..	..	6'2	6'0	6'1	+3'1	18	2	6	8	3	3	8	13	1	S 56° W	S 84° W	10	31	62	70	5'68	2'05	January 1918.	XV.—Madras rivandrum . 31				
...	594	681	...	...	68	61	..	..	..	2'0	2'6	2'3	-0'3	1	3	7	16	1	2	19	6	1	S 11° E	S 81° W	14	43	88	81	0'77	0'70	February 1918.	XV.—Madras rivandrum . 31				
...	729	787	...	...	65	66	..	..	..	4'2	4'4	4'3	+1'3	7	2	7	5	3	3	13	11	11	N 89° W	N 87° W	26	50	91	96	0'62	0'80	March 1918.	XV.—Madras Trivandrum . 31				
...	814	843	...	...	67	68	..	..	..	4'8	6'0	5'4	+0'6	1	4	5	1	0	0	7	16	27	N 58° W	N 69° W	68	65	111	103	1'49	0'44	April 1918.	XV.—Madras Trivandrum . 31				
...	843	867	...	...	79	79	..	..	..	8'3	8'2	8'3	-2'2	8	5	1	0	0	1	5	16	28	N 62° W	N 63° W	68	78	128	124	18'87	2'72	May 1918.	XV.—Madras Trivandrum . 31				
...	821	824	...	...	78	77	..	..	..	6'9	7'4	7'1	-0'8	0	7	0	0	0	0	16	37	N 52° W	N 6° W	90	81	139	123	5'76	2'05	June 1918.	XV.—Madras Trivandrum . 31					

\* Departure from old normal.

## Supplementary Corrigenda in the India Monthly Weather Reviews for 1914 to 1918.

## TEXT.

Page.	Column.	Part.	Correction.
6	2	January 1914 .	For "+·055 and +·029" read "+·096 and -·012" respectively against Darjiling and Dhubri in the figure columns 1 and 3 of Table 9.
19	2	February 1914 .	For "-·006 and +·031" read "+·040 and -·015" respectively against Darjiling and Dhubri in the figure columns 1 and 3 of Table 10.
32	2	March 1914 .	For "-·027 and +·050" read "+·042 and -·019" respectively against Darjiling and Dhubri in the figure columns 1 to 3 of Table 9.
45	2	April 1914 .	For "-·011 and +·093" read "+·057 and +·025" respectively against Darjiling and Dhubri in the figure columns 1 and 3 of Table 9.
53	2	May 1914 .	For "+·006 and +·036" read "+·067 and -·025" respectively against Darjiling and Dhubri in the figure columns 1 and 3 of Table 9.
65	2	June 1914 .	For "0 and +·019" read "+·072 and -·053" respectively against Darjiling and Dhubri in the figure columns 1 to 3 of Table 9.
75	2	July 1914 .	For "-·090?" and +·040?" read "-·021 and -·029" respectively against Darjiling and Dhubri in the figure columns 1 and 3 of Table 10.
62	2	June 1915 .	For "+·035 and +·014" read "+·025 and +·024" respectively against Darjiling and Dhubri in the figure columns 1 and 3 of Table 8.
72	2	July 1915 .	For "-·005 and +·001" read "-·015 and +·011" respectively against Darjiling and Dhubri in the figure columns 1 and 3 of Table 8.
83	2	August 1915 .	For "-·018 and -·020" read "-·028 and -·010" respectively against Darjiling and Dhubri in the figure columns 1 and 3 of Table 8.
94	2	September 1915 .	For "+·026 and +·007" read "+·016 and +·017" respectively against Darjiling and Dhubri in the figure columns 1 and 3 of Table 9.
105	2	October 1915 .	For "-·019 and -·053" read "-·029 and -·043" respectively against Darjiling and Dhubri in the figure columns 1 and 3 of Table 12.
116	2	November 1915 .	For "+·028 and -·035" read "+·018 and -·025" respectively against Darjiling and Dhubri in the figure columns 1 and 3 of Table 9.
125	2	December 1915 .	For "+·004 and -·007" read "-·006 and +·003" respectively against Darjiling and Dhubri in the figure columns 1 and 3 of Table 9.
7	2	January 1916 .	For "+·007 and +·008" read "-·003 and +·018" respectively against Darjiling and Dhubri in the figure columns 1 and 3 of Table 9.
20	2	February 1916 .	For "-·066 and -·021" read "-·076 and -·011" respectively against Darjiling and Dhubri in the figure columns 1 and 3 of Table 8.
30	2	March 1916 .	For "+·007 and -·042" read "-·003 and -·032" respectively against Darjiling and Dhubri in the figure columns 1 and 3 of Table 9.
42	2	April 1916 .	For "-·007 and +·007" read "-·017 and +·017" respectively against Darjiling and Dhubri in the figure columns 1 and 3 of Table 9.
54	2	May 1916 .	For "+·015 and -·008" read "+·005 and +·002" respectively against Darjiling and Dhubri in the figure columns 1 and 3 of Table 10.
65	2	June 1916 .	For "-·050 and -·020" read "-·060 and -·010" respectively against Darjiling and Dhubri in the figure columns 1 and 3 of Table 10.
74	2	July 1916 .	For "+·060 and +·047" read "+·050 and +·057" respectively against Darjiling and Dhubri in the figure columns 1 and 3 of Table 9.
85	2	August 1916 .	For "-·036?" and +·056?" read "+·013 and +·007" respectively against Darjiling and Dhubri in the figure columns 1 and 3 of Table 10.
94	2	September 1916 .	For "-·032 and -·016" read "-·042 and -·006" respectively against Darjiling and Dhubri in the figure columns 1 and 3 of Table 9.
105	2	October 1916 .	For "-·013 and -·014" read "-·023 and -·004" respectively against Darjiling and Dhubri in the figure columns 1 and 3 of Table 9.

Supplementary Corrigenda in the India monthly Weather Review for 1914-18—*concl.*TEXT—*concl.*

Page.	Column.	Part.	Correction.
117	2	November 1916	For “—·010 and —·016” read “—·020 and —·006” respectively against Darjiling and Dhubri in the figure columns 1 and 3 of Table 9.
127	2	December 1916	For “—·043 and +·011” read “—·053 and +·021” respectively against Darjiling and Dhubri in the figure columns 1 and 3 of Table 9.
6	2	January 1917	For “+·014 and +·020” read “+·004 and +·030” respectively against Darjiling and Dhubri in the figure columns 1 and 3 of Table 9.
19	2	February 1917	For “—·034 and +·010” read “—·044 and +·020” respectively against Darjiling and Dhubri in the figure columns 1 and 3 of Table 9.
28	2	March 1917	For “—·006 and +·016” read “—·016 and +·026” respectively against Darjiling and Dhubri in the figure columns 1 and 3 of Table 9.
39	2	April 1917	For “—·052 and +·005” read “—·062 and +·015” respectively against Darjiling and Dhubri in the figure columns 1 and 3 of Table 9.
54	2	May 1917	For “+·026 and +·007” read “+·016 and +·017” respectively against Darjiling and Dhubri in the figure columns 1 and 3 of Table 10.
65	2	June 1917	For “—·009 and +·007” read “—·019 and +·017” respectively against Darjiling and Dhubri in the figure columns 1 and 3 of Table 10.
76	2	July 1917	For “—·027 and +·002” read “—·037 and +·012” respectively against Darjiling and Dhubri in the figure columns 1 and 3 of Table 10.
85	2	August 1917	For “+·034 and +·007” read “+·024 and +·017” respectively against Darjiling in the figure columns 1 and 3 of Table 10.
95	2	September 1917	For “+·011 and —·001” read “+·011 and +·009” respectively against Darjiling and Dhubri in the figure columns 1 and 3 of Table 10.
105	2	October 1917	For “—·043 and —·020” read “—·053 and —·010” respectively against Darjiling and Dhubri in the figure columns 1 and 3 of Table 10.
115	2	November 1917	For “—·008 and —·024” read “—·018 and —·014” respectively against Darjiling and Dhubri in the figure columns 1 and 3 of Table 10.
125	2	December 1917	For “—·043 and —·010” read “—·053 and 0” respectively against Darjiling and Dhubri in the figure columns 1 and 3 of Table 10.
6	2	January 1918	For “+·005 and +·014” read “—·005 and +·024” respectively against Darjiling and Dhubri in the figure columns 1 and 3 of Table 10.
19	2	February 1918	For “+·010 and —·002” read “0 and +·008” respectively against Darjiling and Dhubri in the figure columns 1 and 3 of Table 10.
31	2	March 1918	For “+·006 and —·008” read “—·004 and +·002” respectively against Darjiling and Dhubri in the figure columns 1 and 3 of Table 10.
43	2	April 1918	For “—·016 and +·026” read “—·026 and +·036” respectively against Darjiling and Dhubri in the figure columns 1 and 3 of Table 10.
56	2	May 1918	For “—·043 and —·029” read “—·053 and —·019” respectively against Darjiling and Dhubri in the figure columns 1 and 3 of Table 10.
67	2	June 1918	For “—·022 and +·017” read “—·032 and +·027” respectively against Darjiling and Dhubri in the figure columns 1 and 3 of Table 10.

**Supplementary Corrigenda in the India Monthly Weather Reviews for 1914—1918.**

**TABLE B.**

Page.	Part.	Table.	Meteorological Province or Station.	Heading.	Column No.	Correction.
xvi	January 1914 .	B	Darjiling . .	Pressure . .	3 to 6	For "7,376, 23-074, +055 and 23-029" read "7,432, 23-067, +096 and 23-022" respectively.
xlvi	February 1914 .	"	Ditto . .	Ditto . .	3 to 6	For "7,376, 22-979, -006 and 22-934" read "7,432, 22-988, +040 and 22-943" respectively.
lxxii	March 1914 .	"	Ditto . .	Ditto . .	3 and 5	For "7,376 and -027" read "7,432 and +042" respectively.
e	April 1914 .	"	Ditto . .	Ditto . .	3 and 5	For "7,376 and -011" read "7,432 and +057" respectively.
exx	May 1914 .	"	Ditto . .	Ditto . .	3 and 5	For "7,376 and +006" read "7,432 and +067" respectively.
elvi	June 1914 .	"	Ditto . .	Ditto . .	3 and 5	For "7,376 and 0" read "7,432 and +072" respectively.
clxxxiv*	July 1914 .	"	Ditto . .	Ditto . .	3 and 5	For "7,376 and -090" read "7,432 and -021" respectively.
cxiv	August 1914 .	"	Ditto . .	Ditto . .	3 and 5	For "7,376 and -094" read "7,432 and -023" respectively.
ccl	September 1914 .	"	Ditto . .	Ditto . .	3 and 5	For "7,376 and -048" read "7,432 and +029" respectively.
cclviii	October 1914 .	"	Ditto . .	Ditto . .	3 and 5	For "7,376 and -059" read "7,432 and +014" respectively.
cxcviii	November 1914 .	"	Ditto . .	Ditto . .	3 and 5	For "7,376 and -096" read "7,432 and -027" respectively.
cexxiv	December 1914 .	"	Ditto . .	Ditto . .	3 and 5	For "7,376 and ?" read "7,432 and -010" respectively.
ccclii	Annual, 1914 .	"	Ditto . .	Ditto . .	3 to 6	For "7,376, 22-983, +023 and 22-938" read "7,432, 22-982, +023 and 22-937" respectively.

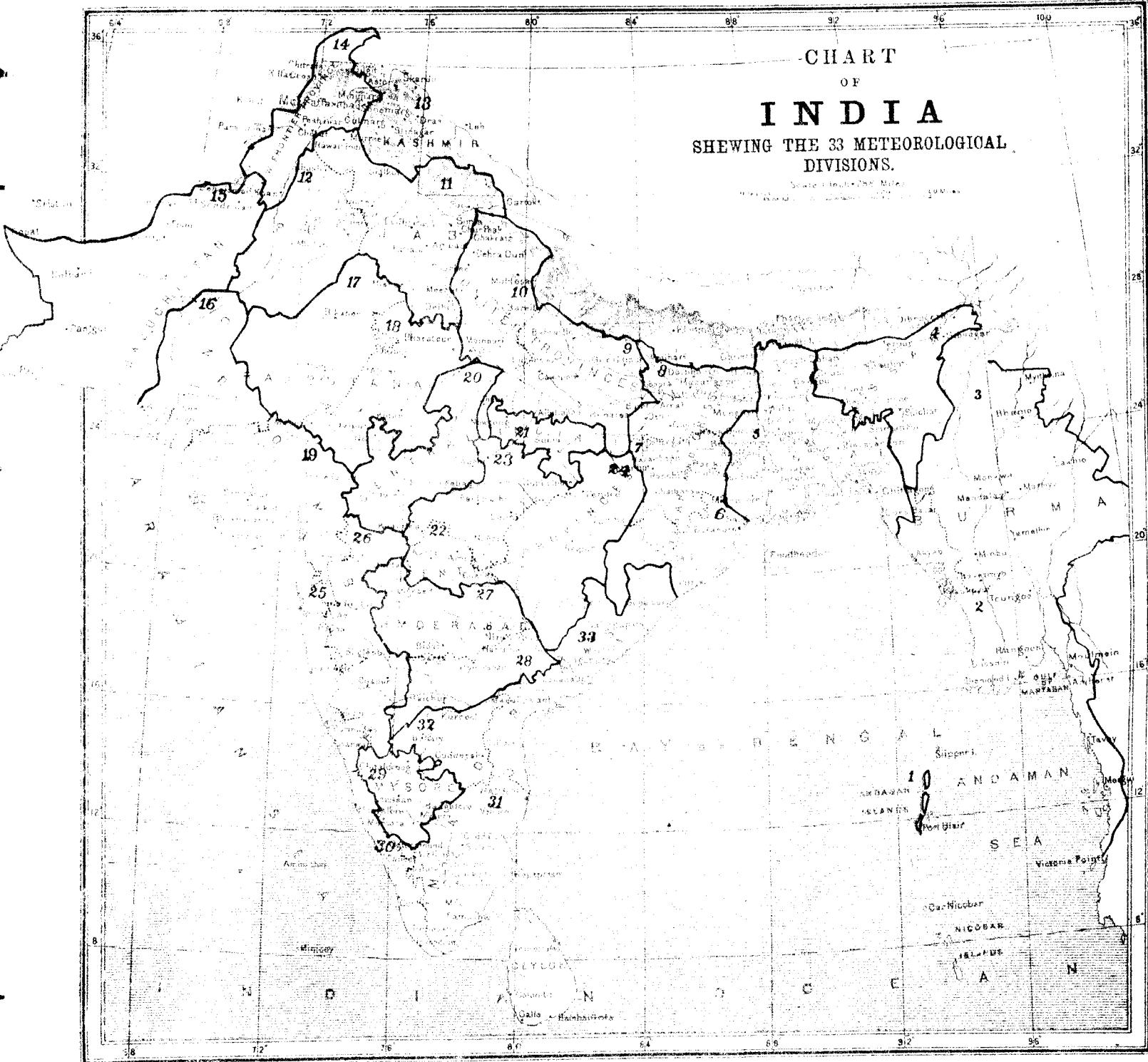
**Cancel all Corrigenda Corrections against Darjiling during 1914.**

xvi	January 1915 .	B	Darjiling . .	Pressure . .	3 to 6	For "7,376, 23-019, -046 and 22-974" read "7,432, 23-035, +064 and 22-990" respectively.
xlvi	February 1915 .	"	Ditto . .	Ditto . .	3 to 6	For "7,376, 22-935, ? and 22-890" read "7,432, 22-951, +003 and 22-908" respectively.
lxxii	March 1915 .	"	Ditto . .	Ditto . .	3 and 5	For "7,376 and blank" read "7,432 and +054" respectively.
e	April 1915 .	"	Ditto . .	Ditto . .	5	Insert "+020".
exx	May 1915 .	"	Ditto . .	Ditto . .	5	Insert "-038".
elvi	June 1915 .	"	Ditto . .	Ditto . .	3 and 5	For "7,376 and -024" read "7,432 and +025" respectively.
clxxxiv	July 1915 .	"	Ditto . .	Ditto . .	5	For "-005" read "-015".
cxiv	August 1915 .	"	Ditto . .	Ditto . .	5	For "-018" read "-028".
ccl	September 1915 .	"	Ditto . .	Ditto . .	5	For "+026" read "+016".
cclviii	October 1915 .	"	Ditto . .	Ditto . .	5	For "-019" read "-029".
cxcviii	November 1915 .	"	Ditto . .	Ditto . .	5	For "+028" read "+018".
cexxiv	December 1915 .	"	Ditto . .	Ditto . .	5	For "+004" read "-006".
ccclii	Annual, 1915 .	"	Ditto . .	Ditto . .	4, 5 and 6	For "22-959, +007 ii and 22-913" read 22-961, +007 and 22-916" respectively.

## Supplementary Corrigenda in the India Monthly Weather Reviews for 1914—1918—concl.

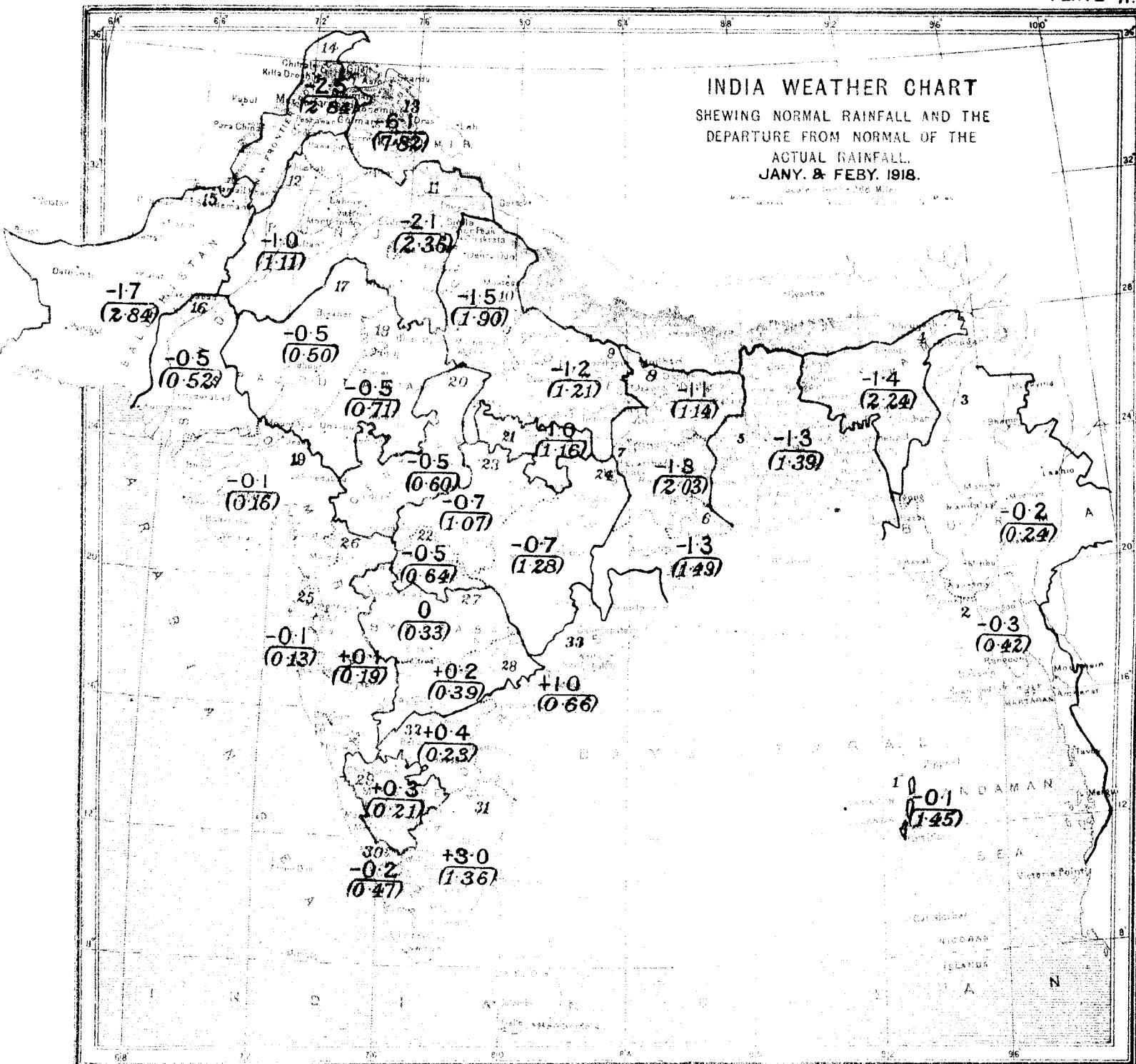
TABLE B—concl.

Page.	Part.	Table.	Meteorological Province or Station.	Heading.	Column No.	Correction.
xvi	January 1916	B	Darjiling	Pressure	5	For “ +·007 ” read “ —·003 ”.
xlvi	February 1916	„	Ditto	Ditto	5	For “ —·066 ” read “ —·076 ”.
lxii	March 1916	„	Ditto	Ditto	5	For “ +·007 ” read “ —·003 ”.
xc	April 1916	„	Ditto	Ditto	5	For “ —·007 ” read “ —·017 ”.
exx	May 1916	„	Ditto	Ditto	5	For “ +·015 ” read “ +·005 ”.
cxlvi	June 1916	„	Ditto	Ditto	5	For “ —·050 ” read “ —·060 ”.
clxxiv	July 1916	„	Ditto	Ditto	5	For “ +·060 ” read “ +·050 ”.
cciv	August 1916	„	Ditto	Ditto	5	For “ —·036 ” read “ +·018 ”.
cxxx	September 1916	„	Ditto	Ditto	5	For “ —·032 ” read “ —·042 ”.
cclviii	October 1916	„	Ditto	Ditto	5	For “ —·013 ” read “ —·023 ”.
cclxxxviii	November 1916	„	Ditto	Ditto	5	For “ —·010 ” read “ —·020 ”.
ccxiv	December 1916	„	Ditto	Ditto	5	For “ —·043 ” read “ —·053 ”.
cecxlii	Annual, 1916	„	Ditto	Ditto	5	For “ —·009 ” read “ —·019 ”.
xvi	January 1917	„	Ditto	Ditto	5	For “ +·014 ” read “ —·004 ”.
xlvi	February 1917	„	Ditto	Ditto	5	For “ —·034 ” read “ —·044 ”.
lxii	March 1917	„	Ditto	Ditto	5	For “ —·006 ” read “ —·016 ”.
c	April 1917	„	Ditto	Ditto	5	For “ —·052 ” read “ —·062 ”.
exx	May 1917	„	Ditto	Ditto	5	For “ +·026 ” read “ +·016 ”.
clvi	June 1917	„	Ditto	Ditto	5	For “ —·009 ” read “ —·019 ”.
clxxxiv	July 1917	„	Ditto	Ditto	5	For “ —·027 ” read “ —·037 ”.
ccxii	August 1917	„	Ditto	Ditto	5	For “ +·034 ” read “ +·024 ”.
cexlili	September 1917	„	Ditto	Ditto	5	For “ +·011 ” read “ +·001 ”.
cclviii	October 1917	„	Ditto	Ditto	5	For “ —·043 ” read “ —·053 ”.
ccxvi	November 1917	„	Ditto	Ditto	5	For “ —·008 ” read “ —·018 ”.
coexxi	December 1917	„	Ditto	Ditto	5	For “ —·043 ” read “ —·053 ”.
ccclxxxii	Annual, 1917	„	Ditto	Ditto	5	For “ —·011 ” read “ —·021 ”.
xvi	January 1918	„	Ditto	Ditto	5	For “ +·005 ” read “ —·005 ”.
xliv	February 1918	„	Ditto	Ditto	5	For “ +·010 ” read “ 0 ”.
lxxiv	March 1918	„	Ditto	Ditto	5	For “ +·006 ” read “ —·004 ”.
c	April 1918	„	Ditto	Ditto	5	For “ —·016 ” read “ —·026 ”.
exxviii	May 1918	„	Ditto	Ditto	5	For “ —·043 ” read “ —·053 ”.
clviii	June 1918	„	Ditto	Ditto	5	For “ —·022 ” read “ —·032 ”.



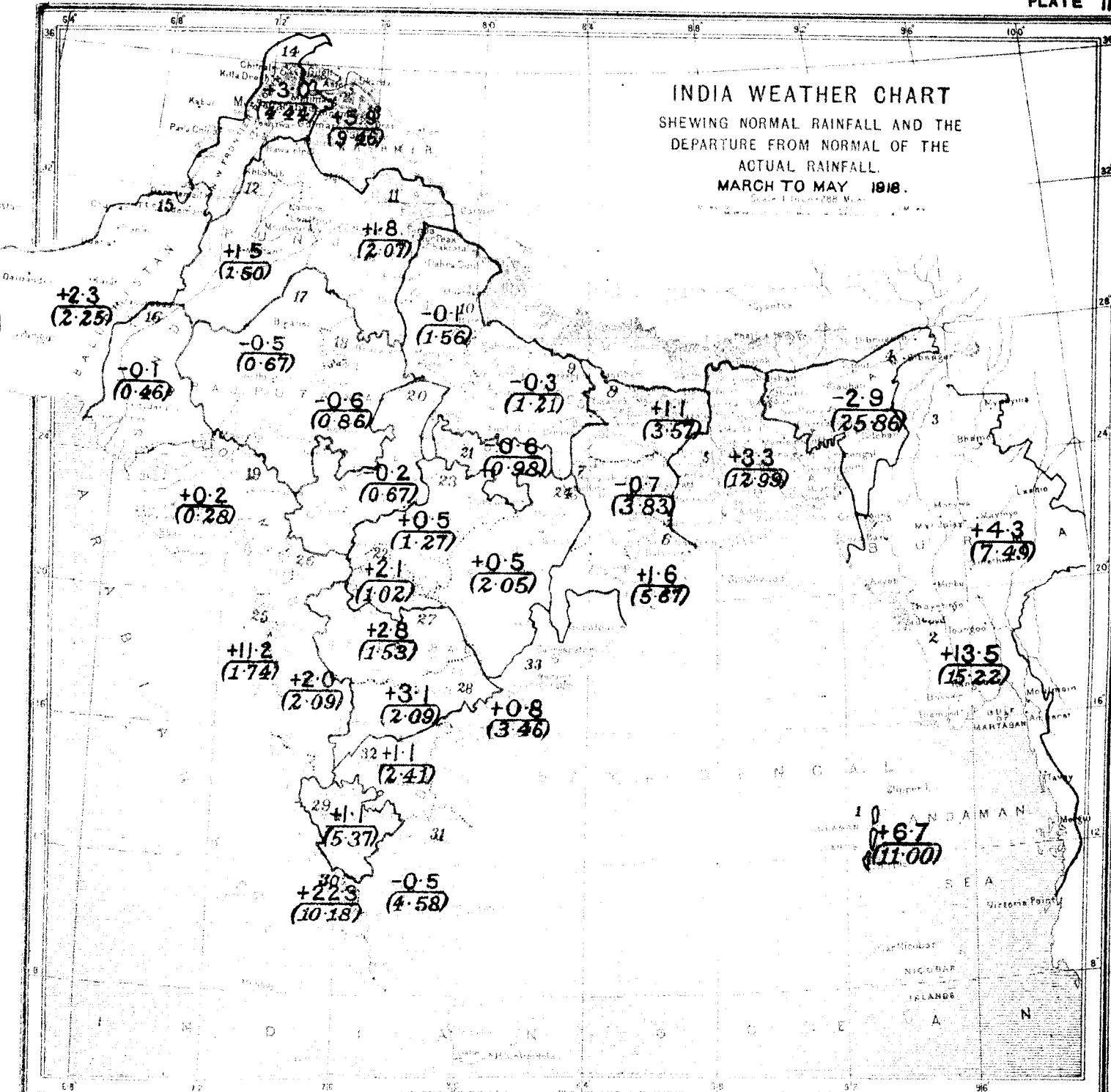
The country is divided into 33 areas as shewn in the list below. The numbers in that list correspond with the red numbers on the chart, and serve to identify the areas.

- |                           |                                 |                             |                         |
|---------------------------|---------------------------------|-----------------------------|-------------------------|
| 1. Bay Islands            | 10. United Provinces, West      | 19. Gujarat                 | 28. Hyderabad, South    |
| 2. Lower Burma            | 11. Punjab, East and North      | 20. Central India, West     | 29. Mysore              |
| 3. Upper Burma            | 12. Do., Southwest              | 21. Do., East               | 30. Malabar             |
| 4. Assam                  | 13. Kashmir                     | 22. Berar                   | 31. Madras, Southeast   |
| 5. Bengal                 | 14. Northwest Frontier Province | 23. Central Provinces, West | 32. Madras, Deccan      |
| 6. Orissa                 | 15. Baluchistan                 | 24. Do., East               | 33. Madras Coast, North |
| 7. Chota Nagpur           | 16. Sind                        | 25. Konkan                  |                         |
| 8. Bihar                  | 17. Rajputana, West             | 26. Bombay, Deccan          |                         |
| 9. United Provinces, East | 18. Rajputana, East             | 27. Hyderabad, North        |                         |



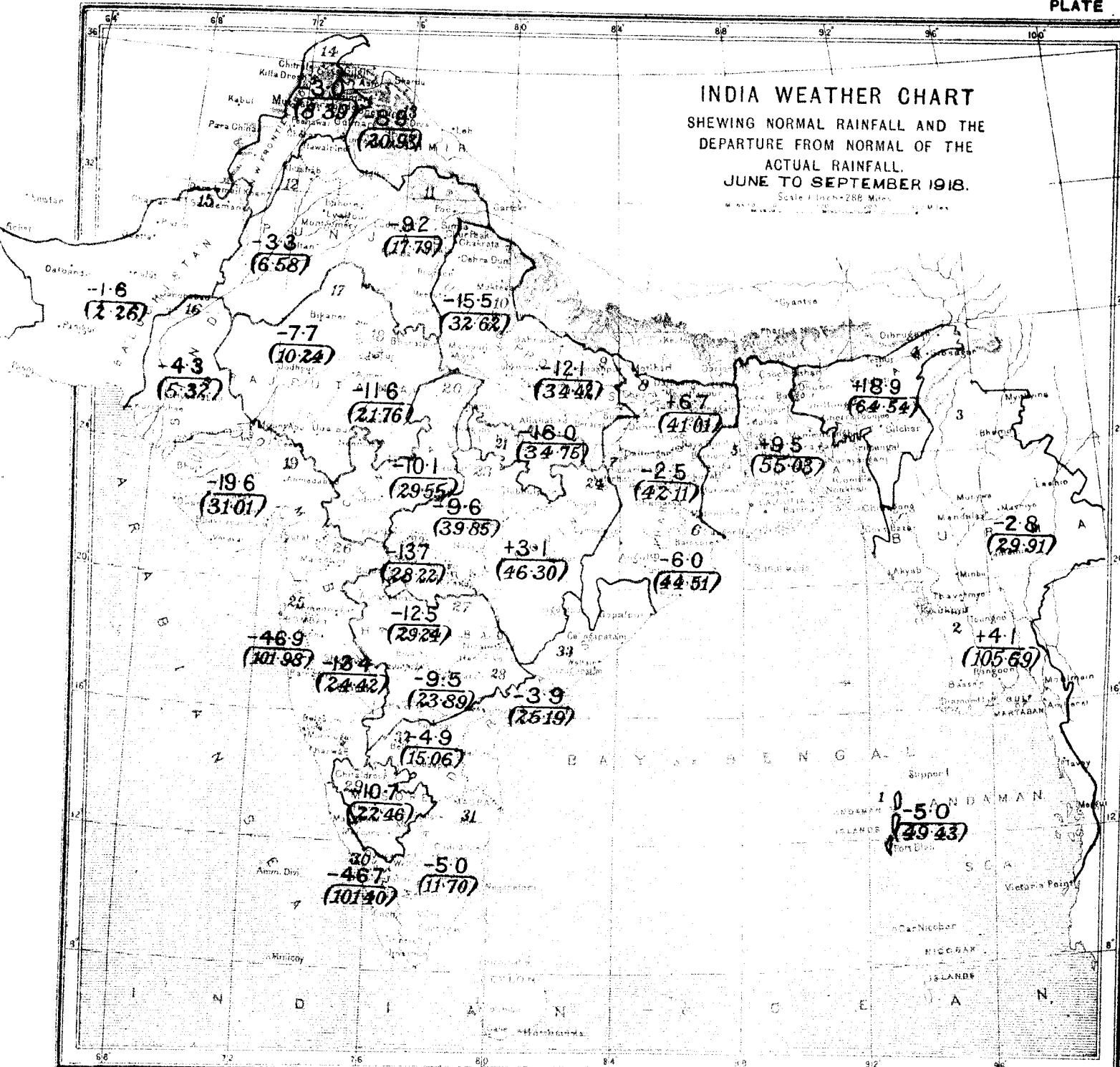
The country is divided into 33 areas as shown in the list below. The numbers in that list correspond with the red numbers on the chart, and serve to identify the areas. The numbers in brackets on the chart give the average over the divisions of the normal rainfall; the numbers above these give the departures from normal of the average annual rainfall over the divisions.

- |                           |                                 |                             |                         |
|---------------------------|---------------------------------|-----------------------------|-------------------------|
| 1. Bay Islands            | 10. United Provinces, West      | 19. Gujarat                 | 28. Hyderabad, South    |
| 2. Lower Burma            | 11. Punjab, East and North      | 20. Central India, West     | 29. Mysore              |
| 3. Upper Burma            | 12. Do., Southwest              | 21. Do., East               | 30. Malabar             |
| 4. Assam                  | 13. Kashmir                     | 22. Berar                   | 31. Madras, Southeast   |
| 5. Bengal                 | 14. Northwest Frontier Province | 23. Central Provinces, West | 32. Madras, Deccan      |
| 6. Orissa                 | 15. Baluchistan                 | 24. Do., East               | 33. Madras Coast, North |
| 7. Chota Nagpur           | 16. Sind                        | 25. Konkan                  |                         |
| 8. Bihar                  | 17. Rajputana, West             | 26. Bombay, Deccan          |                         |
| 9. United Provinces, East | 18. Rajputana, East             | 27. Hyderabad, North        |                         |



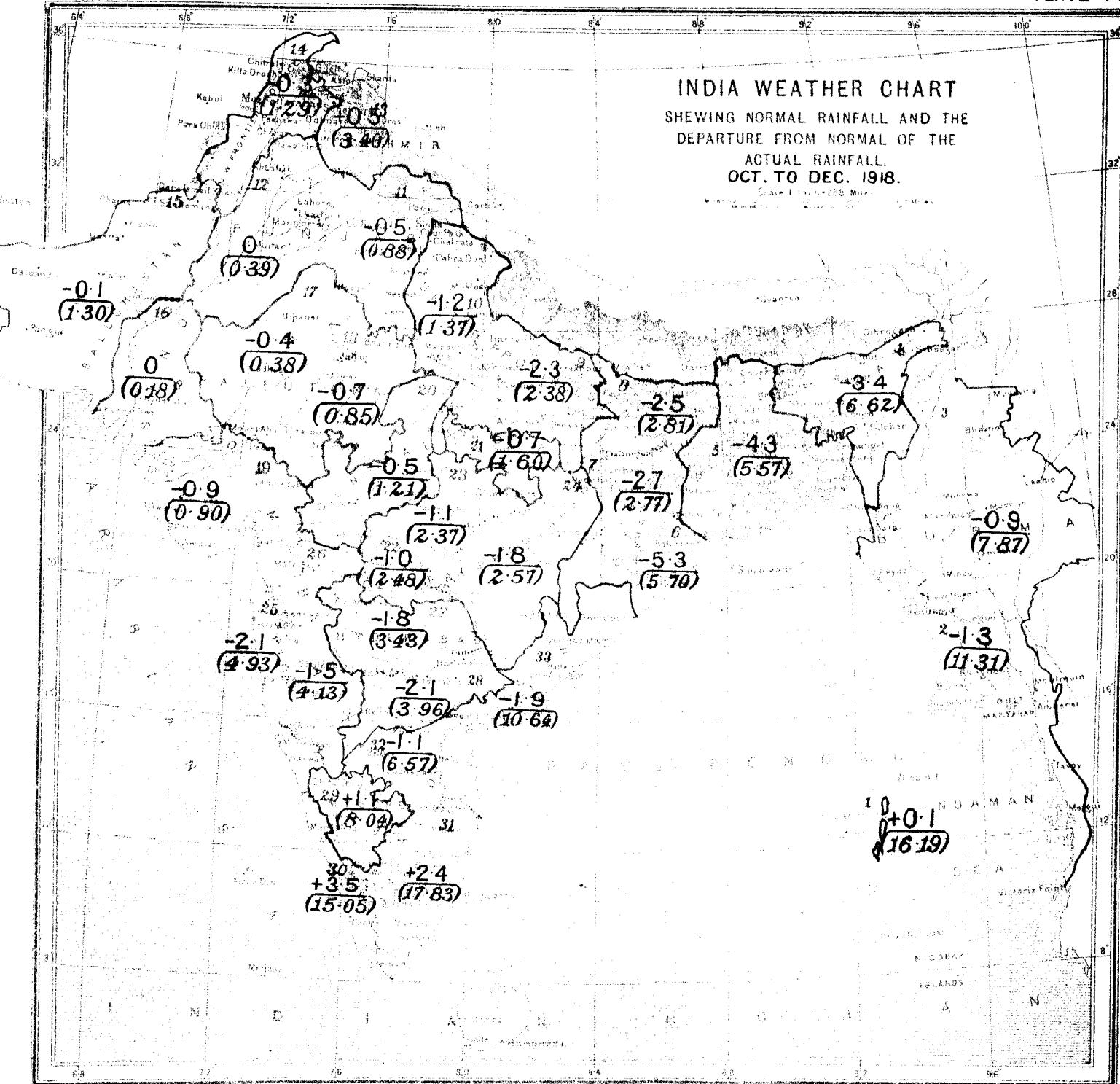
The country is divided into 35 areas as shown in the list below. The numbers in that list correspond with the red numbers on the chart, and serve to identify the areas. The numbers in brackets on the chart give the average over the divisions of the normal rainfall; the numbers above these give the departures from normal of the average actual rainfall over the divisions.

- |                           |                                 |                             |                         |
|---------------------------|---------------------------------|-----------------------------|-------------------------|
| 1. Bay Islands            | 10. United Provinces, West      | 19. Gujarat                 | 28. Hyderabad, South    |
| 2. Lower Burma            | 11. Punjab, East and North      | 20. Central India, West     | 29. Mysore              |
| 3. Upper Burma            | 12. Do., Southwest              | 21. Do., East               | 30. Malabar             |
| 4. Assam                  | 13. Kashmir                     | 22. Berar                   | 31. Madras, Southeast   |
| 5. Bengal                 | 14. Northwest Frontier Province | 23. Central Provinces, West | 32. Madras, Deccan      |
| 6. Orissa                 | 15. Baluchistan                 | 24. Do., East               | 33. Madras Coast, North |
| 7. Chota Nagpur           | 16. Sind                        | 25. Konkan                  |                         |
| 8. Bihar                  | 17. Rajputana, West             | 26. Bombay, Deccan          |                         |
| 9. United Provinces, East | 18. Rajputana, East             | 27. Hyderabad, North        |                         |



The country is divided into 33 areas as shown in the list below. The numbers in that list correspond with the red numbers on the chart, and serve to identify the areas. The numbers in brackets on the chart give the average over the divisions of the normal rainfall; the numbers above these give the departures from normal of the average actual rainfall over the divisions.

1. Bay Islands
2. Lower Burma
3. Upper Burma
4. Assam
5. Bengal
6. Orissa
7. Chota Nagpur
8. Bihar
9. United Provinces, East
10. United Provinces, West
11. Punjab, East and North
12. Do., Southwest
13. Kashmir
14. Northwest Frontier Province
15. Baluchistan
16. Sind
17. Rajputana, West
18. Rajputana, East
19. Gujarat
20. Central India, West
21. Do., East
22. Berar
23. Central Provinces, West
24. Do., East
25. Konkan
26. Bombay, Deccan
27. Hyderabad, North
28. Hyderabad, South
29. Mysore
30. Malabar
31. Madras, Southeast
32. Madras, Deccan
33. Madras Coast, North



The country is divided into 33 areas as shown in the list below. The numbers in that list correspond with the red numbers on the chart, and serve to identify the areas. The numbers in brackets on the chart give the average over the divisions of the normal rainfall; the numbers above these give the departures from normal of the average actual rainfall over the divisions.

- |                           |                                 |                             |                         |
|---------------------------|---------------------------------|-----------------------------|-------------------------|
| 1. Bay Islands            | 10. United Provinces, West      | 19. Gujarat                 | 28. Hyderabad, South    |
| 2. Lower Burma            | 11. Punjab, East and North      | 20. Central India, West     | 29. Mysore              |
| 3. Upper Burma            | 12. Do., Southwest              | 21. Do., East               | 30. Malabar             |
| 4. Assam                  | 13. Kashmir                     | 22. Berar                   | 31. Madras, Southeast   |
| 5. Bengal                 | 14. Northwest Frontier Province | 23. Central Provinces, West | 32. Madras, Deccan      |
| 6. Orissa                 | 15. Baluchistan                 | 24. Do., East               | 33. Madras Coast, North |
| 7. Chota Nagpur           | 16. Sind                        | 25. Konkan                  |                         |
| 8. Bihar                  | 17. Rajputana, West             | 26. Bombay, Deccan          |                         |
| 9. United Provinces, East | 18. Rajputana, East             | 27. Hyderabad, North        |                         |



*(This list of publications is intended for permanent reference, and should be bound up with the Annual Summary.)*

**Publications of the India Meteorological Department.**

*(Complete list, inclusive of those publications which are now out of print.)*

# PUBLICATIONS OF THE INDIA METEOROLOGICAL DEPARTMENT.

The following is a list of the more important publications of the India Meteorological Department:—

The Indian Meteorologist's *Vade Mecum*, Part I, 2nd Edition. (1883) . . . . . Price Rs. 3\*

The Indian Meteorologist's *Vade Mecum*, Part II. (1877) . . . . . Price Rs. 5\*

Instructions to Observers of the India Meteorological Department, 2nd Edition. (1902) . . . . . Price Rs. 3\*

Tables for the reduction of Meteorological Observations in India, 2nd Edition. (1889) . . . . . Price Rs. 2\*

Handbook of Cyclonic storms in the Bay of Bengal for the use of sailors, 2nd Edition, Vol. I.—Text. (1900) . . . . . Price Rs. 4\*

Handbook of Cyclonic storms in the Bay of Bengal for the use of sailors, 2nd Edition, Vol. II.—Plates. (1901) . . . . . Price Rs. 1-8\*

Cyclone Memoirs, Part I—Bay of Bengal Cyclone of May 20th to 28th, 1887. (1888) . . . . . Price Re. 1\*

Cyclone Memoirs, Part II—Bay of Bengal Cyclone of August 21st to 28th, 1888. (1890) . . . . . Price Rs. 3

Cyclone Memoirs, Part III—Bay of Bengal Cyclones of September 13th to 20th, and October 27th to 31st, 1888, and Arabian Sea Cyclone of November 6th to 9th, 1888. (1890) Price Rs. 5

Cyclone Memoirs, Part IV—An enquiry into the nature and course of storms in the Arabian Sea and a catalogue and brief history of all recorded storms in the Arabian Sea from 1848—1889. (1891) . . . . . Price Rs. 3.

Cyclone Memoirs, Part V—Account of three Cyclones in the Bay of Bengal and Arabian Sea during November, 1891. (1893) . . . . . Price Rs. 3\*

Report of the Midnapore and Burdwan Cyclone of the 15th and 16th of October, 1874. (1875) . . . . . Price Rs. 3\*

Report of the Vizagapatam and Backergunge Cyclones of October, 1876. (1877) . . . . . Price Rs. 3\*

Report on the Madras Cyclone of May 1877. (1879) Price Rs. 3\*

Monthly weather charts of the Bay of Bengal and adjacent sea north of the equator, showing mean pressure, winds and currents. (1886) . . . . . Price Rs. 5\*

Monthly weather charts of the Arabian Sea and the adjacent portion of the North Indian Ocean, showing mean pressure, winds and currents. (1888) . . . . . Price Rs. 5

Charts of the Bay of Bengal and adjacent sea north of the equator, showing the specific gravity, temperature and currents of the sea surface. (1887) . . . . . Price Rs. 1-8

Climatological Atlas of India (1906). Price Rs. 27 or 36 shillings\*

Meteorological Atlas of the Indian seas and the north Indian Ocean. (1908) . . . . . Price Rs. 13 or 17 shillings 6 pence\*

Daily weather reports and charts of the Indian monsoon area for the years 1893 to 1899. . . . . Price, each month, Re. 1\*

Normal weather or pilot charts of the Indian monsoon area for 8 A.M. for each month, November, 1900 to August, 1908† Price, each month, Annas 4

Reports on the Meteorology of India for the years 1875—1890 (16 volumes)‡ . . . . . Price each Rs. 10

Indian Meteorological Memoirs, Vol. I, containing:—  
Part I. On the winds of Calcutta—An analysis of 10 years' hourly observations of the wind vane and four years' anerograms.

The meteorology and climate of Yarkhand and Kashgar, being chiefly a discussion of registers kept by Dr. J. Scully in 1874-75. The diurnal variation of the barometer at Simla. Price Rs. 3\*

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GOVERNMENT OF INDIA  
METEOROLOGICAL DEPARTMENT

# MONTHLY WEATHER REVIEW

JANUARY 1918

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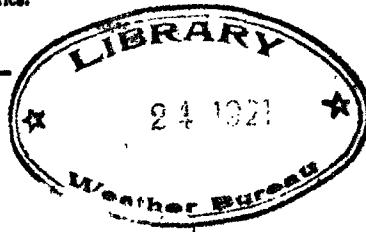
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GOVERNMENT OF INDIA  
METEOROLOGICAL DEPARTMENT

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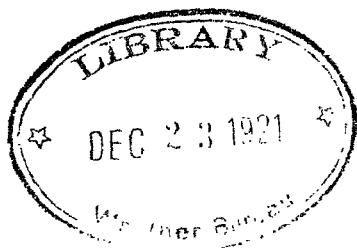
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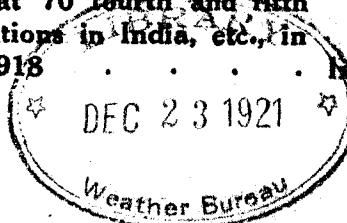
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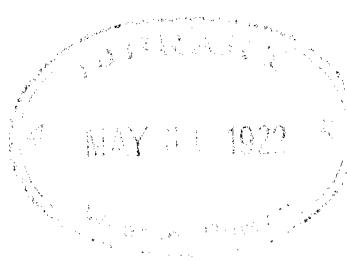
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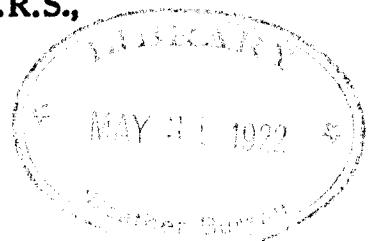
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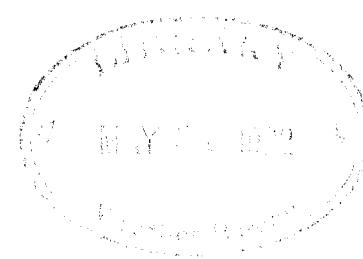
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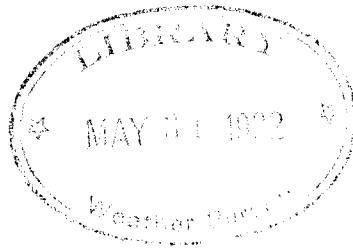
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GOVERNMENT OF INDIA  
METEOROLOGICAL DEPARTMENT

# INDIA WEATHER REVIEW

## ANNUAL SUMMARY, 1918

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*Director General of Observatories*

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